

An abstract geometric design on a dark grey background. It features several circles of varying sizes and patterns, connected by thin white lines. The circles include solid grey, diagonal hatching, and chevron patterns. The lines form a network-like structure across the page.

Est.  
1841

YORK  
ST JOHN  
UNIVERSITY

# The Data Science Degree Apprenticeship

## Discover

## Data Science

Data Science is one of the most exciting and dynamic fields of study in the world today.

The advanced analysis of data belonging to complex systems and organisations means data scientists can see patterns and trends in human behaviour on a scale and with a level of accuracy we could not have contemplated in the past. This means data scientists have the knowledge at their fingertips to make exciting changes happen.

Data scientists develop advanced skills in modelling complex real-life systems, visualisation, problem-solving and communication,

meaning they can engage with audiences and demonstrate insights that make the organisation they work for more agile, innovative and effective.

The York St John University Data Science Degree Apprenticeship aims to develop multi-skilled, multi-disciplined data scientists through a programme that develops acquisition of the necessary technical skills.

On completion, learners will achieve a BSc (Hons) Data Science Degree Apprenticeship and will graduate at York Minster along with all York St John University graduates.



# Introducing STEM

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## York St John University

York St John University has been a leading education institution since 1841. We make choices and champion voices that reflect our commitment to sustainability, equality and the human spirit.

We are proud of our heritage and our expertise and are confident in our future. Our ambition for our students makes us a special place to study. As an established provider of undergraduate, postgraduate and professional development opportunities we are committed to widening access to Higher Education and helping our students to feel future-ready.

## York and London

Established in the heart of the historic city of York, and with a new campus in London, we serve a global community of staff and students who thrive on academic excellence, graduate employability and a strong sense of belonging. With both York and London locations you can take advantage of our excellent campus-wide and online facilities.

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## STEM

Data Science is part of our suite of STEM (Science, Technology, Engineering and Mathematics) courses. STEM includes creative, innovative, and analytical subjects which touch on nearly every aspect of our lives. They provide solutions to scientific and technological challenges faced by business, governments and societies.

STEM equips you with the fundamental practical, technical, cognitive, and creative skills needed to succeed in the modern world and workplace. It enables you to investigate the 'how' and 'why' of the world around you.

“Our university has a proud history of partnering with businesses to create opportunities and promote a fairer society”.

**Professor Karen Bryan,**  
Vice Chancellor,  
York St John University



“Encouraging interdisciplinary approaches and creating a vibrant community of learners was central for us when designing our STEM courses at York St John. Sharing ideas with people from different disciplines and backgrounds sparks solutions and helps you solve complex problems”.

**Dr Pierre-Philippe Dechant**  
Senior Lecturer in Data Science  
at York St John University



## Degree Apprenticeships with York St John University

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# Academic Study + on-job-training

For the workforce you employ today and  
the workforce you aim to attract.

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### Benefits for you:

- Upskilling teams as well as individuals
- Recruit motivated talent
- Increase engagement through investment and progression
- Retain and access talent
- Meet your business needs
- Increase productivity
- Exposure to new tools and techniques
- Providing rigorous foundations

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### YSJU Degree Apprenticeships:

- Senior Leaders Apprenticeship
- Chartered Manager Degree Apprenticeship
- Laboratory Scientist Degree Apprenticeship
- Data Scientist Degree Apprenticeship
- Healthcare Science Practitioner Degree Apprenticeship
- Project Management Degree Apprenticeship





# What will I study?

Through extensive national consultation with employers, York St John University has developed a programme which not only meets the knowledge, skills and behaviours of the Degree Apprenticeship Standard but will also rigorously develop the highly technical knowledge and skills necessary to enable you to respond to the competitive, challenging global business environment.

Studying at York St John University's York or London Campus, you will follow pathways across the following clusters:

- Statistics and Data Analysis
- Computer Science
- Mathematical Foundations
- Modelling and Systems
- Communication and Visualisation
- Applications and Business Context
- Interdisciplinarity and Integration

**The modules you will study:**

**IN YEAR ONE:**

Level	Title
4	Programming
4	LAAlgebra
4	Probability, Statistics & Data Analysis
4	Practice in Interdisciplinary Problem Solving
4	Analysis & Optimisation

**IN YEAR TWO:**

Level	Title
4	Communication
5	Databases
5	Geometry & Groups
5	Modelling and Numerical Analysis
5	Object-oriented Programming

**IN YEAR THREE/FOUR:**

Level	Title
5	Graphs, Networks & Systems
5	Work-based Project
6	Data Visualisation
6	Artificial Intelligence
6	Advanced Data Applications
6	End-point Assessment

## How we will deliver learning

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Learning and teaching begins with two days of online introductory teaching and learning workshops at the start of the programme during YSJU Welcome Week followed by online live sessions one day per week. The live sessions occur every Thursday and comprise lectures, individual and group work as well as practical workshops.

Although we expect you and your employer to make every attempt for you to attend the weekly online sessions, we acknowledge that this might not always be possible due to unforeseen demand from your job. We will therefore record all the sessions and make them available to all apprentices.

Two extra days per semester are designed as online support sessions to help those who may need extra support to stay on track and progress.

In addition, there are two revision weeks (one per semester) before the exam weeks. The revision weeks are designed to give you an opportunity to come to university campus to receive extra support if you wish to before the exam weeks at the end of each semester.

The learning and teaching sessions will also be delivered within YSJU approved term times and ensure the commitment to minimum 6 hours in their working week off the job studying time for the apprentices.

The weekly live sessions utilise a range of student-centred active learning techniques, from working towards solving a data science related problem to presenting it through interactive discussions. They have been designed to give you the intellectual freedom, stimulation, and concentration to work on the content materials gradually.





## Support

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As well as dedicated account management support from the York St John Apprenticeship Team, learners and employers will also be allocated with the following:

**An Academic Advisor:**

Facilitates learning within the modules at each stage of the programme through personalised tuition, learner support and feedback.

**A Work-based Mentor:**

All learners require the support of a Work-based Mentor and/or Line Manager (outside of normal line management duties). As part of the funding, the Work-based Mentor will receive developmental training regarding roles and responsibilities.

Work-based Mentors will also be invited to a series of events and briefings throughout the duration of the programme. This is to ensure that they are in a good position to support the apprentices, particularly in relation to assessments and the End-point Assessment.

**A Work-based Learning Tutor:**

Employers and apprentices are provided with dedicated support from a Work-based Learning Tutor at York St John University. This person is responsible for ensuring that both the organisation and the apprentice are well informed and supported throughout the duration of the apprenticeship and will coordinate and arrange tri-partite progress meetings.

Apprentices can access support throughout their time studying at York St John. They will have access to the full range of services and support that we offer on our York or London campus to all students and through our virtual learning environment.

- 24-hour global access to 'Moodle' our virtual learning environment full of your course resources and more
- Use of the University sports facilities, including gym, fitness classes and our brand new £3.8 million sports facilities at Haxby Road playing fields
- Full access to the YSJ library 24 hours a day
- Membership of our Student Union which has over 60 sports clubs and societies to get involved with
- Access to the wide range of academic and wellbeing support from our University Student Support Team - you can find out more via our Vacancies page: [www.yorks.ac.uk/study/degree-apprenticeships/degree-apprenticeship-vacancies/](http://www.yorks.ac.uk/study/degree-apprenticeships/degree-apprenticeship-vacancies/)

# Entry Requirements

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**New employees including school and non-school leavers:** A Levels in Maths (PASS) and two other subjects (PASS).

**Current staff:** The candidate must be fully suited to undertake the substantial challenge of an apprenticeship combined with the rigorous academic study at degree level, with either:

- i. A levels in Maths (PASS) and two other subjects (PASS), or
- ii. Where applicants do not hold a Maths A level qualification, they will be asked to take a Mathematics, Statistics and Computing test at application stage. The level of the test is at Maths A level. There are three sections in the test: Computing, pure and applied Maths (Probability and Statistics). Each section is a one-hour test. We are offering two test dates for the September 2023 intake. These are to be confirmed. There will be an opportunity of retaking the test on the next available date should the applicant fail.
- iii. Where applicants have significant experience in this area and have already completed higher level study in a similar subject (e.g. Maths degree), applicants will be asked to provide further details at application stage if they think they have covered any of the areas on the Modules & Outcomes check list (available on website). Please note Data Analyst Level 4, and similar qualifications are not at the same standard as A-level in Maths.

iv.

## 2023 Entry Dates

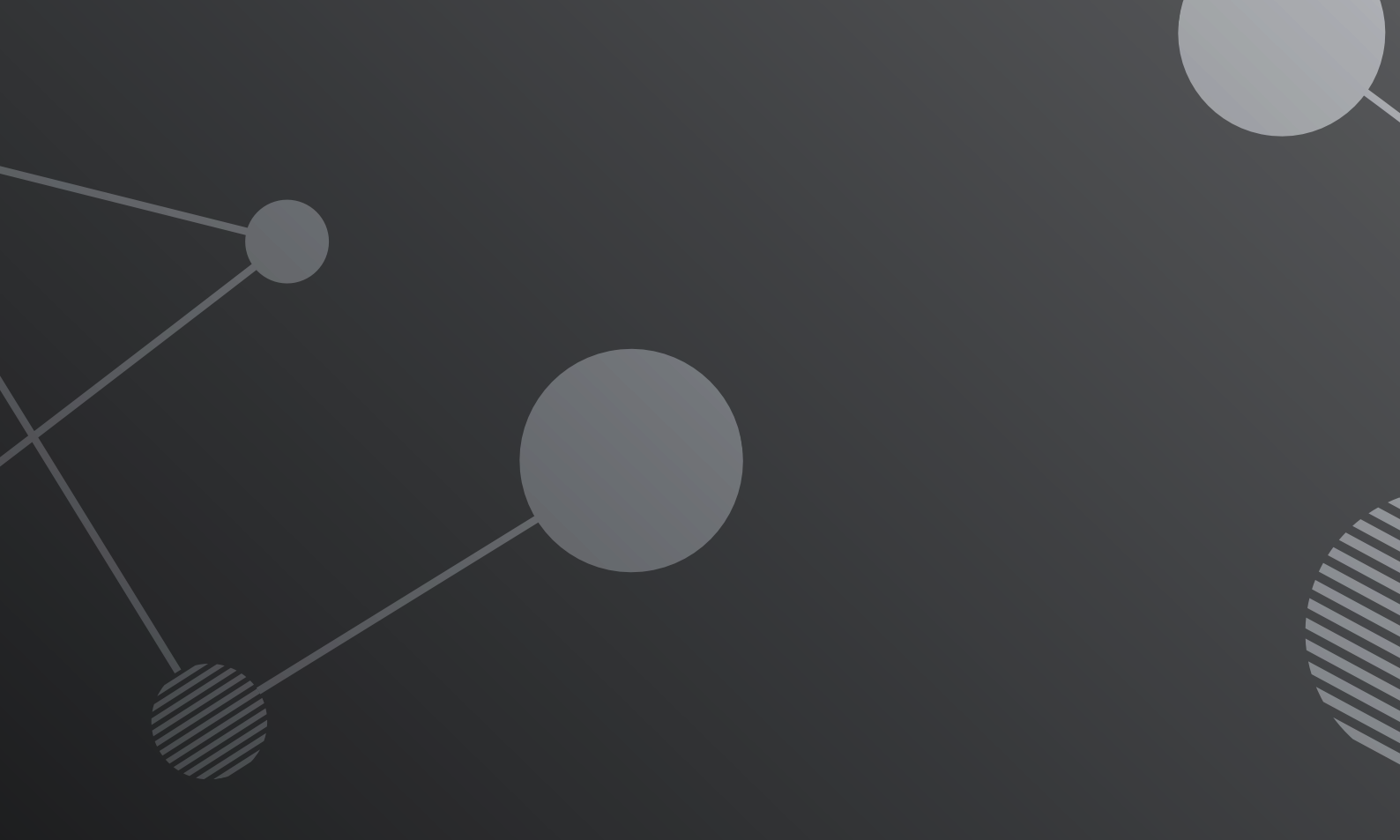
**York & London Campus**  
September 2023

**Length: 42 months** (Including End-point Assessment)

**Fees: £19K.** This programme is offered exclusively as a Data Science Degree Apprenticeship allowing levy paying companies in England to offset their levy payments when engaging employees in this development programme.







**The Data  
Science Degree  
Apprenticeship**

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