Data Scientist Apprenticeship

MK:U

Cranfield University

Course overview

This course equips learners with practical skills in data analytics, machine learning, and AI. Apprentices gain the expertise to tackle real-world challenges and drive data-informed decision-making in organisations.

Benefits for business

Enhanced decision making
Equip your staff with advanced data skills to drive smarter, data-backed business strategies.

Increased efficiency
Leverage AI and analytics to streamline processes and improve productivity.

Future-proof expertise
Develop in-house experts ready to tackle evolving business challenges and stay ahead of the competition.

Duration
32 months delivery + 3 months assessment

Cost
Fully funded by the Apprenticeship Levy.

Level
Level 6 - Degree Apprenticeship with an integrated BSc degree.

Core skills

Machine Learning ¦ Big Data ¦ Artificial Intelligence ¦ Strategic Data Analysis ¦ Python Programming ¦ Analytical Problem Solving

Right for

➔ **Companies with data teams**
Businesses that generate significant amounts of data.

➔ **Entry-level individuals**
Solve data problems regardless of experience level. We'll build a strong foundation in areas like programming, maths and later machine learning.

➔ **Career changers**
Whether you're from business, finance or another field, explore new opportunities in data.

➔ **Analytical thinkers**
Hone your problem-solving skills with our focus on critical areas.

Entry requirements

96 UCAS points, 3/C at A-level (or equivalent) or relevant experience.

Why choose MK:U ?

Hands-on

Real-world experience through industry-relevant projects and training.

Problem-based

Case studies from diverse industries to ensure practical learning.

Professional skills

Curriculum combining technical and soft skills essential for career success.

Bespoke facilities

State-of-the-art facilities and extensive industry partnerships for specialised skill development.

"I can't praise MK:U enough for their thorough onboarding process where learners and line managers attend separate apprenticeship information sessions. The sessions were online walking each through their learning journey.
On a recent visit to MK:U the facilities were outstanding, and I found the learners fully engaged.
I would readily recommend MK:U to other employers to train their apprentices."

Sue Poulton
Apprenticeship Manager
Marston Holdings

Course details

Modules are split between **in-person blocks** and **days live online**.

- – 10 day module
- – 5 day module
- –1 day module
- – self directed

Year 1

The Digital World

Introductory module exploring the synergies between technology, business, and leadership through interactive sessions on relevant topics e.g. programming, cyber security.

Programming Foundations

Programming fundamentals, data handling and analytics, visualisation techniques, control flow and logic, functions and modularity, data structures, algorithms.

Professional Skills 1

Develops career and personal skills, including emotional intelligence, creative thinking, personal branding, corporate social responsibility, and digital literacy.

Data Analytics for Business Intelligence

Data Science Life Cycle, covering problem definition, data collection and processing, data analytics, and reporting and visualisation.

Analytical Problem Solving

Essential analytical techniques and tools, including modelling and statistical concepts.

Strategic Data Analytics

End-to-end analytics process, focusing on developing effective dashboards, analysing key business metrics, and communicating insights to stakeholders, in a strategic and impactful way.

Year 2

Secure Data-Driven Solutions

Experience of each of the stages of the software development lifecycle. A number of cases will be explored to demonstrate a variety of approaches, and highlight the strengths and weaknesses of each approach.

Machine Learning for Business Impact

Practical experience in data exploration, data management, and machine learning, bridging business requirements with technical solutions.

Professional Skills 2

Develops leadership and professional skills, including negotiation, building high-performance teams, influencing others, and managing risk.

Big Data and Cloud Computing

Big Data and cloud technologies, focusing on scalable data storage, processing, analytics, and visualisation.

Business for Digital Professionals

How organisations function, including digital domain and the organisation's environment. It will also address how digital advances are disrupting business and supporting societal goals.

Year 3

Artificial Intelligence for Strategic Impact

Practical experience in machine learning and deep learning, developing modelling skills. Learners will explore the role of Data Scientist in the broader organisational environment and the Data Science Lifecycle.

Professional Project

Plan, research and deliver a complex, workplace-relevant, Data Science project, supervised and mentored by academics to ensure high standards of applied knowledge.

End Point Assessment

Demonstrate application of Knowledge, Skills and Behaviours through workplace projects.

Book a meeting to find out more

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