Course Specification

BSc (Hons) Data Science and Artificial Intelligence

Course Code: BDTAI

2026/27

leedsbeckett.ac.uk

BSc (Hons) Data Science and Artificial Intelligence (BDTAI)

Applicant Facing Course Specification for 2026/27 Undergraduate Entrants

Confirmed at

General Information

Award	Bachelor of Science with Honours Data Science and Artificial Intelligence
	If you opt to undertake a full year placement and this is completed successfully you will have the words 'with placement year' added to the award title including for any contained awards that you are eligible for.
Contained Awards	Bachelor of Science Data Science and Artificial Intelligence (Level 6)
	Diploma of Higher Education Data Science and Artificial Intelligence (Level 5)
	Certificate of Higher Education Data Science and Artificial Intelligence (Level 4)
Awarding Body	Leeds Beckett University
Level of Qualification and Credits	Level 6 of the Framework for Higher Education Qualifications, with 120 credit points at each of Levels 4, 5 and 6 of the UK Credit Framework for Higher Education (360 credits in total).
	If you have opted to undertake a full year placement and complete this successfully you will achieve an additional 120 credit points at level 5. This will be included in your transcript.
Course Lengths and Standard Timescales	Start dates will be notified to students via their offer letter. The length and mode of delivery of the course is confirmed below:
	• 3 years (full time, campus based)
	• 4 years (full time, campus based, with placement year – if applicable)
	• 6 years (part time, campus based)
Part Time Study	PT delivery is usually at half the intensity of the FT equivalent course, although there may be flexibility to increase your pace of study to shorten the overall course duration. Some modules may be delivered in a different sequence to that defined within this information set but

	the modules offered within each level are consistent. Please note that the work placement option is not generally available to PT students.
Location(s) of Delivery	The majority of teaching will be at Headingley campus but on occasion may be at City campus. Placement location, if applicable, will vary dependant on the opportunity.
Entry Requirements	Admissions criteria are confirmed in your offer letter. Details of how the University recognises prior learning and supports credit transfer are located here: https://www.leedsbeckett.ac.uk/student-information/course-information/recognition-of-prior-learning/ Admissions enquiries may be directed to: AdmissionsEnquiries@leedsbeckett.ac.uk.
Course Fees	Course fees are confirmed in your offer letter. A breakdown of any additional costs is included on the online prospectus entry for this course. Fees enquiries may be directed to Fees@leedsbeckett.ac.uk.

Policies, Standards and Regulations (www.leedsbeckett.ac.uk/academicregulations)

There are no additional or non-standard regulations which relate to your course.

Professional Accreditation or Recognition Associated with the Course

Professional Body

British Computer Society (BCS)

Accreditation/ Recognition Summary

The BCS endorsement is awarded to courses that meet specific criteria covering the necessary foundation of computing, including data science knowledge and technical skills, in addition to professional development competencies required to succeed in the profession. When reviewing a course, BCS considers the curriculum, the practical experience gained by students and the resources and facilities of the institution. The rigorous assessment criteria ensure that only the highest calibre courses achieve the BCS endorsement award.

Placement Information

Summary

The course contains a placement year.

Leeds Beckett is dedicated to improving the employability of our students and one of the ways in which we do this is to support our students to gain valuable work experience through work-based placements. Our placement teams have developed strong links with companies, many of whom repeatedly recruit our

students into excellent placement roles and the teams are dedicated to supporting students through every stage of the placement process. More information about the many benefits of undertaking a work placement, along with details about how to contact our placement teams can be found here: http://www.leedsbeckett.ac.uk/studenthub/placement-information/

Placement Delivery

Students are responsible for obtaining their own placement, with assistance from the University.

Location

Placement location will vary dependant on the opportunity.

Approval

Whilst students source their own placements, they will need to meet requirements which will be outlined before module enrolment.

Timetable Information

Timetables for Semester 1 will be made available to students during induction week via:

i)   The Student Portal (MyBeckett)
ii)   The Leeds Beckett app

Any difficulties relating to timetabled sessions may be discussed with your Course Administrator.

Key Contacts

Your Course Director	Dr Jackie Campbell
Your Course Administrator	Jake Wrigglesworth – J.Wrigglesworth@leedsbeckett.ac.uk

Course Overview

Aims

Data Science has a long history within the university having evolved from our areas of information management, knowledge transfer and systems development. In practical terms, data science is conducted as part business analyst, part data engineer, part data analyst, part computer scientist and part 'core' or 'research' data scientist. The role of these managers therefore falls into the following respective domains:

- From a business perspective, data scientists are articulate, good communicators, presentable and have contact with the day-to-day business managers and their customers. They are primarily concerned with the information needed for activities such as strategic planning, production planning, market research, financial planning, product knowledge, legislation, archiving, competitive analysis etc. They understand

the potential, adept at using tools and techniques to analyse data and how best to present the information.

- From a data engineering perspective, data scientists are skilled in managing information technology and understanding the role of data within an organisation. They need to appreciate and acquire the know-how of relevant technologies, and systems (including theories, practice, and working mechanisms), what the latest trends are and their impact on the working environment.

- From a data analyst perspective, data scientists have an empathy with their data. They understand how it can answer queries and provide useful insights and recommendations. They appreciate the power of visualisations to communicate their ideas and findings.

- From a computer scientist perspective, data scientists have understanding of the role of technology in data collection, transmission, manipulation, analysis and storage.

As core data scientists, data scientists draw on new and powerful data analytic techniques such as machine learning and Artificial Intelligence (AI) to gain better insight, estimation and predictions using supervised as well as unsupervised learning.

Course Learning Outcomes

At the end of the course, students will be able to:

1	Demonstrate a systematic understanding of data science, and a critical awareness of the themes that contribute to it. These being data, statistics and analytics, computer science and data engineering. You will understand the current role of data science in business, social context and research.
2	Have a strong understanding of the role of data. You will have practical data-related skills drawing on unpinning theories of data storage, data preparation and data management. You will be aware of the issues with data, data sourcing, data biases, data control and data protection. You will understand the strength and power of data in solving problems and 'telling a story', you will be aware of the tools to communicate your data findings, such as visualisation.
3	Have a strong approach to problem solving and be aware of techniques and theories to inform and support these approaches. You will be able to critically evaluate research in the application of knowledge, together with a practical understanding of how established techniques of research, enquiry and data analytics are used to create and interpret knowledge about data and data management and computer systems which capture, process and transmit data.
4	Develop an ability to independently undertake research and critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete), to make judgements, and to frame appropriate questions to achieve a solution or identify a range of solutions to a problem.

Teaching and Learning Activities

Summary

The Course employs a wide range of learning opportunities and teaching methods, informed by curriculum review, research-based pedagogical approaches and continuous staff development. Innovative approaches to teaching, learning and assessment include the use of simulations, case studies, projects, practical work, work-based learning, formative face-to-face and online collaborative discussion, collaborative and applied learning, projects, and practitioner informed teaching and student-led learning.

Scheduled sessions include the use of lectures, seminars, tutorials and practical laboratory sessions. Advantage is taken of both technology and supportive activities to ensure that effective learning takes place.

Your Modules

This information is correct for students progressing through the programme within standard timescales. Option modules listed are indicative of a typical year. There may be some variance in the availability of option modules. Students who are required to undertake repeat study may be taught alternate modules which meet the overall course learning outcomes. Details of module delivery will be provided in your timetable.

Full Time Delivery

Level 4
Compulsory modules

Module title	Credits	Semester/ teaching period
Introduction to Data Analytics	20	S1
Maths for Data Science and AI	20	S1
Fundamentals of Computer Science	20	S1
Fundamentals of Databases	20	S2
Statistics in Practice	20	S2
Fundamentals of Computer Programming	20	S2
Number of credits of compulsory modules	120	

Level 5
Compulsory modules

Module title	Credits	Semester/ teaching period
Applied Data Analytics and Visualisation	20	S1
Machine Learning Techniques for AI	20	S1
Database Systems	20	S1
Team Project	20	S2
Programming for Data Science	20	S2
Digital Transformation	20	S2
Number of credits of compulsory modules	120	

Placement year (if chosen) – Core Module

Module title	Credits	Semester/ teaching period
Placement Module	120	Min 40 weeks

Level 6
Compulsory modules

Module title	Credits	Semester/ teaching period
Advanced Machine Learning for AI	20	S1
Advanced Databases	20	S1
Critical Perspectives on Information	20	S2
Production Project	40	S1 & S2
Number of credits of compulsory modules	100	

Option modules

Module title	Credits	Semester/ teaching period
Developing Mobile Applications	20	S2
Intelligent Computer Vision	20	S2
Number of credits of option modules a student should choose	20	

Part Time Delivery

Level 4
Compulsory modules

Module title	Credits	Semester/ teaching period
Introduction to Data Analytics	20	S1 / Year 1
Maths for Data Science for AI	20	S1 / Year 1
Fundamentals of Databases	20	S2 / Year 1
Fundamentals of Computer Science	20	S1 / Year 2
Statistics in Practice	20	S2 / Year 2
Fundamentals of Programming	20	S2 / Year 2
Number of credits of compulsory modules	120	

Level 5
Compulsory modules

Module title	Credits	Semester/ teaching period
Applied Data Analytics and Visualisation	20	S1 / Year 3
Database Systems	20	S1 / Year 3
Programming for Data Science	20	S2 / Year 3
Machine Learning Techniques for AI	20	S1 / Year 4
Information Analysis	20	S2 / Year 4

Module title	Credits	Semester/ teaching period
Team Project	20	S2 / Year 4
Number of credits of compulsory modules	120	

Level 6
Compulsory modules

Module title	Credits	Semester/ teaching period
Advanced Databases	20	S1 / Year 5
Advanced Machine Learning for AI	20	S1 / Year 5
Critical Perspectives on Information	20	S2 / Year 5
Production Project	40	S1 & S2 / Year 6
Number of credits of compulsory modules	100	

Option modules

Module title	Credits	Semester/ teaching period
Developing Mobile Applications	20	S2 / Year 5
Intelligent Computer Vision	20	S2 / Year 5
Number of credits of option modules a student should choose	20	

Assessment Balance and Scheduled Learning and Teaching Activities by Level

The assessment balance and overall workload associated with this course are calculated from core modules and typical option module choices undertaken by students on the course. They have been reviewed and confirmed as representative by the Course Director but applicants should note that the specific option choices students make may influence both assessment and workload balance.

A standard module equates to 200 notional learning hours, which may be comprised of teaching, learning and assessment, any embedded placement activities and independent study. Modules may have more than one component of assessment.

Assessment

Level 4 is assessed by a mix of examinations, presentations and coursework.

Level 5 is assessed by a mix of examinations, presentations and coursework.

Level 5 placement is assessed by presentation and a report

Level 6 is assessed by a mix of examinations, presentations and coursework.

Workload

Overall Workload	Level 4	Level 5	Level 5 placement (if chosen)	Level 6
Teaching, Learning and Assessment	288 hours	228 hours		169 hours
Independent Study	912 hours	972 hours		1031 hours
Placement			1400 hours	

Workload

Overall Workload	Level 4	Level 5	Level 5 placement (if chosen)	Level 6