Course Specification

MSc Data Science

Course Code: MDATS

2024/25

MSc Data Science (MDATS)

Applicant Facing Course Specification for 2024/25 Postgraduate Entrants

Confirmed at <u>11/2023</u>

General Information

Award	Master of Science Data Science
Contained Awards	Postgraduate Diploma Data Science
	Postgraduate Certificate Data Science
Awarding Body	Leeds Beckett University
Level of Qualification and Credits	Level 7 of the Framework for Higher Education Qualifications, with 180 credit points at Level 7 of the Higher Education Credit Framework for England.
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:

- 1 year (full time, campus based) for September starters without placement.

- 2 years (full time, campus based) for September starters with 30-week placements. Placements are on condition of the students making successful applications to secure a placement.

- 15 months (full time) for January starters. This is due to the 'break' over the summer. Students complete semester 1 from Jan to May, return in September for semester 2, then take the dissertation from Jan to May the next year. There is no placement opportunity for January starters.

- 2 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.
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 and any additional course costs are confirmed in your offer letter. Fees enquiries may be directed to Fees@leedsbeckett.ac.uk.

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.

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

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

Key Contacts

Your Course Director	Jackie Campbell
Your Academic Advisor	Each student will be allocated an Academic Advisor once they commence their studies at the University. The Academic Advisor will be a member of the Computing Academic Staff.
Your Course Administrator	Helen Turpin - H.Turpin@leedsbeckett.ac.uk

Placement Information (for September starters only)

Summary

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 team have developed strong links with companies, many of whom repeatedly recruit our students into excellent placement roles. Our team are dedicated to supporting students through every stage of the placement process. Details of how to contact our placement team may be found here:

www.leedsbeckett.ac.uk/studenthub/placement-information

Length

30 weeks, undertaken between taught curriculum and the Dissertation

Location

Students are responsible for obtaining their own placement, with assistance from the University. The locations will vary, dependent on the opportunity.

Professional Accreditation or Recognition Associated with the Course

Professional Body

The British Computer Society (BCS)

Accreditation/ Recognition Summary

The British Computer Society has accredited this course, this means the course meets the industry requirements to support professional roles in computing.

Course Overview

Aims

The aims of the programme are to:

Develop data understanding alongside crucial theoretical principles in data analytics, strategy and data governance. In practical terms, data science is conducted by data managers who are part business-minded, part manager, part technologist and part data scientist. The role of these managers therefore falls into the following respective domains:

- As business-people, data managers 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, the tools and techniques to analyse the data and how best to present the information.

- As managers, they run businesses within businesses and are concerned with people, budgets and projects. They therefore need to deal with financial planning, human resource management, project management, technology planning, communications, decision analysis and control systems.

- As technologists, data managers are skilled in managing information technology and understanding big data. They need to know about technology, systems and how they work, what the latest trends are and the impact of it on the working environment. They also bridge the gap between "real technologists" and end users.

- As data scientists, data managers are able to think critically about the data, are skilled in activities such as information collection, analysis and presentation alongside the legal, ethical and data governance issues.

Our students may be working in one of these roles and looking to gain a wider appreciation, perhaps as part of their career strategy. The course outcomes develop all of these roles, the core modules provide a generic overview in information, data management and systems with option modules allowing the student to find a route that suits their own skills, aspirations and interest area. The dissertation/project allows for a specific area to be investigated deeply. The Project Management module ensures that all students graduate with skills enabling them to manage people and projects as would be expected from this MSc

Course Learning Outcomes

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

1	Demonstrate a systematic understanding of knowledge, and a critical awareness of current ethical, data governance and security problems and/or new insights, associated with the exploitation of information services and resources in organisations and to support collection, sorting and ordering of data, big data and information in an organisation.
2	Critically evaluate and demonstrate originality and current research in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge about data and data management and management of computer systems which capture, process and transmit data.
3	Deal with complex business issues both systematically and creatively, make informed professional judgements in the absence of complete data and information, implement and communicate their conclusions clearly to specialist and non-specialist audiences.
4	Take responsibility for continuing to advance their knowledge and understanding, and to develop new skills to a high level – both generally (as appropriate to the holder of a masters level award) and specifically as related to the field of data science.

Teaching and Learning Activities

Summary

The MSc Data Science course has been developed using the University Education strategy and stipulates that "Leeds Beckett aims to be an excellent, accessible, globally engaged university contributing positively to a thriving Northern economy. Our Mission is to ensure we use our knowledge and resources to make a positive and decisive difference to people, communities and organisations." Our objective is to provide an **Excellent Education and Experience** to all our students. This is achieved on the MSc Data Science course by:

- Ensuring the curriculum is relevant – we include Guest Lectures from local Companies in the area. Recently NHS Digital gave a talk on their Data Warehouse and Price Waterhouse gave a Guest Lecture on a project they are doing for the University around student attrition. Globally active research staff ensure new applications and innovations are represented.

- Ensuring the students are supported – the post graduate courses have a small number of students on them and a core staff team. We aim to create a strong course identity via a shared understanding of the course aims, outcomes and expectations. Students are made aware of how to contact us, via drop in sessions, email and assessment feedback opportunities. The postgraduate lab is available solely for them to ensure they have space to meet with each other. It is well used. We arrange social events and encourage social networking.

- Ensuring the teaching methods are appropriate. Leeds Beckett has been awarded "silver" status in the National Teaching Excellence Framework (TEF) results. The University is active in its research into Education and shares and supports staff in the design and delivery of modules. The postgraduate progression, engagement and feedback rates for this course are excellent.

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. Regular team meetings ensure that tutors are able to share and develop their understanding of the parts of the course in which they are not directly involved and understand the students' profile better.

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.

Students, on and off-campus are able to engage with the course director and module leaders through the pre-assigned availability times and social activities organised twice a year. A Facebook group and discussion boards within modules will allow them to develop supportive networks with other peers, as does the designated Postgraduate lab. Opportunities to celebrate the postgraduate students' achievements include the Postgraduate Showcase of project work and the Postgraduate Research Conference.

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.

This course will feature a mix of blended learning, both online and in-person. Lectures and seminars will be delivered live and also be recorded.

Full Time Delivery

Level 7			
Semester 1	**Core (Y/N)**	**Semester 2**	**Core (Y/N)**
Data Analytics and Visualisation (20 credits)	Y	Database Systems & Approaches (20 credits)	Y
Research Practice (20 credits)	Y	Research Practice (20 credits)	Y
		Project Management (20 credits)	Y
Data Warehouse Models and Approaches (20 credits) **OR** Managing Information in the Digital and Global Environment (20 credits)	N	Critical Perspectives on Information (20 credits) **OR** Intelligent Systems & Machine Learning (20 credits)	N
Semester 3	**Core (Y/N)**		
Dissertation (60 credits)	Y		

Placement module on sandwich version of the course

Part Time Delivery

Level 7			
Semester 1 – Year 1	**Core (Y/N)**	**Semester 2 – Year 1**	**Core (Y/N)**
Data Analytics and Visualisation (20 credits)	Y	Database Systems & Approaches (20 credits)	Y
Research Practice (20 credits)	Y		
Semester 3 – Year 2	**Core (Y/N)**	**Semester 4 – Year 2**	**Core (Y/N)**
Data Warehouse Models and Approaches (20 credits) **OR** Managing Information in the	N	Critical Perspectives on Information (20 credits) **OR**	N

Level 7			
Digital and Global Environment (20 credits)		Intelligent Systems & Machine Learning (20 credits)	
		Project Management (20 credits)	Y
Semester 5 – Year 2	**Core (Y/N)**		
Dissertation (60 credits)	Y		

The option modules listed are indicative of a typical year. There may be some variance in the availability of option modules.

* Students on the part time route would be expected to take 3 modules in the year (rather than the 6 modules on the full time route)

There is flexibility with this, they can take 2 modules each semester if they choose and start the dissertation in 'Semester 4' or take one module in one semester and two in the next and start the Dissertation in 'Semester 5'.

An example is given above.

As for full time students, the order of the modules will be slightly different depending on whether they are September or January starters.

Assessment Balance and Scheduled Learning and Teaching Activities

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

On this course students will be assessed predominantly by coursework, with a focus on practical skills development, with some supervised tests. There is a major independent study module which will require the production of a dissertation.

Workload

Overall Workload	
Teaching, Learning and Assessment	200 hours
Independent Study	1600 hours

Overall Workload	
Placement (optional)	30 weeks

Learning Support

If you have a question or a problem relating to your course, your Course Administrator is there to help you. Course Administrators work closely with academic staff and can make referrals to teaching staff or to specialist professional services as appropriate. They can give you a confirmation of attendance letter, and a transcript. You may also like to contact your Course Rep or the Students' Union Advice team for additional support with course-related questions.

Student Services

If you have any questions about life at University, call into our Student Services Centre at either campus or contact Student Advice directly. This team, consisting of trained officers and advisers are available to support you throughout your time here. They will make sure you have access to and are aware of the support, specialist services, and opportunities our University provides. They also work on a wide range of projects throughout the year all designed to enhance your student experience and ensure you make the most of your time with us. Student Advice are located in the Student Services Centre in the Leslie Silver Building at City Campus and on the ground floor of the Priestley Building at Headingley Campus. The team can also be contacted via email at studentadvice@leedsbeckett.ac.uk, telephone on 0113 812 3000, or by accessing our online chat link, available on the student homepage.

Support and opportunities

Within MyBeckett you will see two tabs (Support and Opportunities) where you can find online information and resources for yourselves. The Support tab gives you access to details of services available to give you academic and personal support. These include Library Services, the Students' Union, Money advice, Disability advice and support, Wellbeing, International Student Services and Accommodation. There is also an A-Z of Support Services, and access to online appointments/registration.

The Opportunities tab is the place to explore the options you have for jobs, work placements, volunteering, and a wide range of other opportunities. For example, you can find out here how to get help with your CV, prepare for an interview, get a part-time job or voluntary role, take part in an international project, or join societies closer to home.