LEEDS BECKETT UNIVERSITY

Course information for applicants

This information applies to the course as it will be delivered to students starting the course in 2027/28.
Information provided here was confirmed on 24/08/2026

General information

Programme code
MADCS

Target award
If you complete this course successfully you will be eligible for the award of:
MSc Advanced Computer Science

Delivery mode
✓ On campus
☐ Distance learning

Where you will study
The majority of teaching will be at Headingley campus but on occasion may be at City campus.

Awarding body
Leeds Beckett University

Regulator
Office for Students

Level of qualification
Level 7 of the Framework for Higher Education Qualifications

Course duration
If you are made an offer of a place on the course, your offer letter will include the start date.

This course can be studied:
12 months, full-time (September start)
15 months, full-time (January start)
24 months, full time (Optional 30-week work placement, September Starters only)
24 months, part-time

Part-time study

This course can be studied part-time.

If you study the course part-time, it will usually take twice as long to complete compared with the equivalent full-time course. The modules may be delivered in a different sequence than on the full-time course, but you will study the same modules at each academic level. With the agreement of the course team, you may be able to increase your pace of study to shorten the overall course duration.

As a part-time student, you will not usually have the option of a work placement.

Work placement

The course contains a placement year option.

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

Minimum 30 weeks, undertaken at the end of semester 2 after the completion of taught modules. On returning from placement students will be expected to complete their Dissertation.

Entry requirements

Admissions criteria are available on the online prospectus entry for this course.

If you have previous relevant qualifications or experience, you could be exempt from certain parts of your course. Recognition of prior learning (RPL) allows you to start your course at a point appropriate to the learning and skills that you may have developed in a professional, vocational or community setting.

Find out more here: https://www.leedsbeckett.ac.uk/student-information/course-information/recognition-of-prior-learning
If you have questions about entry requirements and admissions, contact AdmissionsEnquiries@leedsbeckett.ac.uk

Course fees

Course fees and a breakdown of any additional costs is included on the online prospectus entry for this course.

If you have questions about fees for this course, contact Fees@leedsbeckett.ac.uk

Timetable

You will receive your full timetable for the year during induction week.

What you will study

Course aims

The course aims to provide students with an advanced skill set in a range of current topics. It also places an emphasis on project management skills along with development of professional and technical attributes. The course prepares students to work with cutting-edge technologies in industry by blending theory and practice. The course addresses some themes of STEM (Science, Technology, Engineering, and Mathematics), and therefore aimed at contextualising knowledge to real-time scenarios and application to problems in industry. The course is designed to address the skills gap in industry and the heavy demand for Computer Science graduates.

The word “advanced” is used to describe the sophistication brought about by the skill set covered in the modules. The course covers some of the themes of the “fourth-industrial revolution” that is dependent on Cloud Computing, IoT, Smart Systems, Robotics etc. The course enhances the knowledge students already have from a related UG degree. It builds upon their existing knowledge in Software Engineering, Networking Systems, Communications, systems development, and AI. For example, students with an undergraduate degree in Computer Science would have learnt the foundations of AI. The MSc course explores this further and goes deeper in the Smart Systems module and Intelligent Systems and Robotics Module. Furthermore, dissertation is used to reinforce the advanced technical skills gained by the students. Rather than pursue a generic computing project, students will be directed and motivated to work on advanced concepts in computer science that are drawn from expertise within the school. It is worth mentioning that although Computer Science traditionally contains a lot of theory, our approach is also very applied. It encourages students to think about problem solving in industrial contexts.

The course provides a deep understanding of the theory and practice of the advanced areas in Computer Science and their application to industrial and research contexts. The course also provides a pathway for our students who have completed BSc (Hons) Computer Science, to pursue a Masters degree in Advanced Computer Science.

On completion of the course, a student must be able to reflect upon technological advancements and apply expert knowledge to real-life complex computational problems.

Teaching and learning activities

Learning and teaching methods provide high-quality learning opportunities that enable students to demonstrate achievement of the learning outcomes of the Course through the learning outcomes of those modules. By the end of the course, students will have developed high levels of personal responsibility, initiative, creativity, be able to demonstrate originality and critical awareness of current problems and new insights informed by the forefront of the computer science discipline. Progressive use of dealing with complex and later unpredictable situations in projects and problem-based learning will allow students to achieve this and take on greater self-direction of their learning.

The assessment strategy and design recognise the computer industry as a source of inspiration and seeks where possible to align academic work with professional practice. The teaching and assessments will ensure that students are able to demonstrate deeper learning, act independently, collaborate more effectively, deal with complex issues in a systematic way, think critically, use literature more effectively, synthesise and reflect critically.

The Course employs a wide range of learning opportunities and teaching methods including the use of lectures, tutorials, practical work, simulations, dissertation, etc. Advantage will be taken of both technology and supportive activities to ensure that effective learning takes place. The VLE allows scope for students to access learning materials outside their contact hours, providing support for the remainder of the 200 notional learning hours for

each 20-credit module. Students should feel that they are being challenged by the range and level of activities and assessments: students should also feel supported and know how to access that support.

The dissertation expects students to fulfil a project that addresses an advanced problem in Computer Science. It is driven in a manner that requires academics to contribute topics from their research area or a problem that is heavy on Computer Science.

Practical Focus

The course follows a very hands-on approach with practical elements to help students put theory and practice together. The tutorials are all in a lab environment where students work on practical tasks given to them on a weekly basis. We rely on specialist state-of-the-art resources like sandboxed labs, high-end PCs, Robotics lab, and our own cloud infrastructure to deliver a curriculum that is enhanced with practical learning elements. For example:

- Our Network Management module is taught using an Industry Standard Network Management tool on a live network. Students can perform analysis on live network traffic and diagnose problems based on the statistics.
- Intelligent Systems and Robotics module is delivered in the dedicated robotics lab using a Staubli robot.
- Smart Systems module teaches Software Engineering in context of Systems programming and IoT.
- In Cloud Computing module students will learn to deploy services on the Cloud.
- Software Engineering for Service Computing includes practical elements of developing Software Components for the cloud.
- Intelligent Systems and Machine Learning (ISML) covers aspects of Intelligent Systems, Artificial Intelligence and Machine Learning. All these are taught using appropriate software tools.
- The Dissertation **must** be based on a technical product development and will involve many hours of practical development and/or empirical analysis.

Assessments in modules will test a student's technical knowledge by expecting them to demonstrate their practical knowledge even in their course work.

This course will feature a mix of blended learning, both online and in-person.

Course structure

This information is correct for students progressing through the course within standard timescales. If you have to repeat study or take time out during your course, you may be taught alternative modules which meet the overall course learning outcomes.

The option modules listed may vary. Those listed here are likely to be offered in a typical year.

Full-time – September Start

Level 7

Compulsory modules

Module title	Credits	Semester/teaching period
Smart Systems	20	S1 / Year 1
Research Practice	20	S1 / Year 1
Project Management	20	S2 / Year 1
Intelligent Systems and Robotics	20	S2 / Year 1
Dissertation	60	S2 / Year 1
Total number of credits of compulsory modules:	140	

Option modules

Module title	Credits	Semester/teaching period
Network Management	20	S1 / Year 1
Cloud Computing Technologies	20	S1 / Year 1
Advanced Software Engineering	20	S1 / Year 1
Software & Systems	20	S2 / Year 1
Intelligent Systems and Machine Learning	20	S2 / Year 1
Software Engineering for Service Computing	20	S2 / Year 1
Total number of credits of elective modules a student must enrol on:	40	

Full-time – January Start

Level 7

Compulsory modules

Module title	Credits	Semester/teaching period
Smart Systems	20	S2 / Year 1
Research Practice	20	S2 / Year 1
Project Management	20	S1 / Year 1
Intelligent Systems and Robotics	20	S1 / Year 1
Dissertation	60	S2 / Year 1
Total number of credits of compulsory modules:	140	

Option modules

Module title	Credits	Semester/teaching period
Network Management	20	S2 / Year 1
Cloud Computing Technologies	20	S2 / Year 1
Advanced Software Engineering	20	S2 / Year 1
Software & Systems	20	S1 / Year 1
Intelligent Systems and Machine Learning	20	S1 / Year 1
Software Engineering for Service Computing	20	S1 / Year 1
Total number of credits of elective modules a student must enrol on:	40	

Part-time – September Start

Level 7

Compulsory modules

Module title	Credits	Semester/teaching period
Smart Systems	20	S1 / Year 1
Research Practice	20	S1 / Year 1
Project Management	20	S2 / Year 1
Intelligent Systems and Robotics	20	S2 / Year 1
Dissertation	60	S2 / Year 2
Total number of credits of compulsory modules:	140	

Option modules

Module title	Credits	Semester/teaching period
Network Management	20	S1 / Year 2
Cloud Computing Technologies	20	S1 / Year 2
Advanced Software Engineering	20	S1 / Year 2
Software & Systems	20	S2 / Year 2
Intelligent Systems and Machine Learning	20	S2 / Year 2
Software Engineering for Service Computing	20	S2 / Year 2
Total number of credits of elective modules a student must enrol on:	40	

Part-time – January Start

Level 7

Compulsory modules

Module title	Credits	Semester/teaching period
Smart Systems	20	S2 / Year 1
Research Practice	20	S2 / Year 1
Project Management	20	S1 / Year 1
Intelligent Systems and Robotics	20	S1 / Year 1
Dissertation	60	S2 / Year 2
Total number of credits of compulsory modules:	140	

Option modules

Module title	Credits	Semester/teaching period
Network Management	20	S2 / Year 2
Cloud Computing Technologies	20	S2 / Year 2
Advanced Software Engineering	20	S2 / Year 2
Software & Systems	20	S1 / Year 2
Intelligent Systems and Machine Learning	20	S1 / Year 2
Software Engineering for Service Computing	20	S1 / Year 2
Total number of credits of elective modules a student must enrol on:	40	

Assessment and feedback

The balance of assessment may change depending on which option modules you choose.

Level 7

This course is assessed mostly by coursework and practical assessments. There are some examinations, presentations, and phase tests. The 60-credit point Dissertation module will require students to develop a product (or based on an empirical study). This has to be a technical project and must suit the nature of Advanced Computer Science. Students are required to produce a thesis as a part of the dissertation assessment.

Workload

You can expect to spend a total of 100 hours learning per 10 credits.

Typically, a student on this course can expect to divide their time like this:

Overall workload	Level 7
Teaching, learning and assessment	203 hours
Independent study	1597 hours
Placement study	30 weeks