Programme Specification (Undergraduate) FOR ENTRY YEAR: 2026/27

Date created: n/a **Last amended:** 18/03/2026 **Version no.** 1

1. Programme title(s) and code(s):

BSc Mathematics

a) HECOS Code

HECOS Code	%
100403	100

b) UCAS Code (where required)

G100

2. Awarding body or institution:

University of Leicester

3. a) Mode of study

Full-time

b) Type of study

Campus-based in Panjin Campus DUT.

4. Registration periods:

BSc Mathematics

The normal period of registration is 4 years

The maximum period of registration 6 years

5. Typical entry requirements

All students that have followed the Chinese school and qualification system must be from the same Gaokao group (the top group out of four) as students entering other DUT undergraduate programmes. Students must also possess a sufficient level of English language to enable such students to undertake studies with the English language as the teaching medium;

For Year 1 entry, a Gaokao English language score of 70% for English language or an IELTS score of 5.0 will be required. After intensive English language teaching in Year 1, students will be required to demonstrate CEFR Level B2 in English language (otherwise IELTS 6.0).

6. Accreditation of Prior Learning

APL will not be accepted for exemptions from individual modules, however may be considered for direct entry to year 2, on a case by case and subject to the general provisions of the University APL policy.

7. Programme aims

The programme aims to

- to provide students with direct experience of a UK-style degree programme

- to enhance and develop the students' English language skills
- foster confidence, convey knowledge and develop expertise in mathematics, including an appreciation of the usefulness of mathematics;
- provide an education and training in mathematics which includes fundamental concepts and gives an indication of the breadth of mathematics;
- develop an appreciation of the necessity for rigorous justification of assertions and the need for logical arguments;
- develop the ability to model the world using mathematics, and to be able to produce relevant and robust solutions to real world problems;
- enable students to develop self-confidence gained through the provision of careful guidance in the first level, with increasing independence later;
- improve students' team working skills;
- stimulate intellectual development and develop powers of critical analysis, problem solving,
- develop written communication skills and presentational skills;
- develop the ability to communicate solutions to problems and mathematical concepts in general using language appropriate to the target audience;
- develop competence in IT, in particular the use of mathematical software and programming;
- enhance practical computing skills by learning software in common use;
- raise students' expertise and understanding to a point where they could embark upon postgraduate mathematical study;
- develop the ability to complete an independent project;

8. Reference points used to inform the programme specification

- QAA Benchmarking Statement
- Framework for Higher Education Qualifications (FHEQ)
- UK Quality Code for Higher Education
- QAA Subject Benchmark Statement
- University Learning Strategy
- University Assessment Strategy [log in required]
- University of Leicester Periodic Developmental Review Report
- External Examiners' reports (annual)
- United Nations Education for Sustainable Development Goals
- Student Destinations Data

9. Programme Outcomes

Unless otherwise stated, programme outcomes apply to all awards specified in 1. Programme title(s).

a) Discipline specific knowledge and competencies

i) Mastery of an appropriate body of knowledge

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Knowledge of basic theory, basic techniques of analysis, algebra, applied mathematics, and statistics.	Lectures, specified reading, problem classes, surgeries, poster presentations. In addition, elements of e-Learning are incorporated.	Written examinations, assessed written and computational problems. Assessed oral and poster presentations.
Ability to recognise sound argumentation and valid proofs.	Lectures, specified reading, problem classes, surgeries, poster presentations. In addition, elements of e-Learning are incorporated.	Assessed written projects and problem sheets and seminar discussions.
Knowledge of basic techniques, and model problems.	Lectures, specified reading, problem classes, surgeries, poster presentations. In addition, elements of e-Learning are incorporated.	Assessed written projects and problem sheets and seminar discussions.
Knowledge of a computing languages and software.	Computer practical classes.	Assessed practical classes.

ii) Understanding and application of key concepts and techniques

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Novel applications of basic knowledge. Exposition of logical structure. Ability to generalise and specialise.	Lectures, tutorials, problem classes, marked assignments.	Written examination, assessed problems, project report.
Proof techniques. Ability to apply an algorithm for the solution of a standard problem.	Lectures, tutorials, problem classes, marked assignments	Written examinations, assessed problems.
Ability to apply theorems to solve particular problems. Mathematical modelling. Application of computer algorithms for solving finance problems.	Computer practical classes.	Assessed practical classes.

iii) Critical analysis of key issues

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Analysis of problem and selection of appropriate proof or solution strategy. Critical appraisal of solutions. Analyse and solve more `messily defined' finance management problems. Analysis of IT problems.	Lectures, problem classes, feedback on assessed problems, project supervision.	Written examinations, assessed problems, Project report.

iv) Clear and concise presentation of material

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Presentation of results (both informal and to a variety of audiences), participation in scientific discussion.	Tutorials, Group workshops, Presentation workshops, project supervision. Feedback on assessed written pieces.	Group presentations. Project presentations.
Ability to write coherent reports. Software presentation.	Guidance from project supervisor.	Assessed essays. Project presentation.

v) Critical appraisal of evidence with appropriate insight

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Project design.	Project supervision	Project reports.

vi) Other discipline specific competencies

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Knowledge of mathematical software such as MATLAB and MAPLE.	Lab classes, and purpose designed handbooks.	Log books of practical sessions. Reflective blogs. Use of Maple in basic skills tests.
Mathematical modelling skills. Language of finance.	Group projects. Project and lectures, eLearning.	Project reports. Written examinations and presentations.

b) Transferable skills

i) Oral communication

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Response to questioning	Tutorials, workshops.	Presentation assessment.
Scientific communication	Tutorials, workshops.	Presentation assessment.
Project and poster presentation	Project supervision, presentation workshops.	Presentation assessment.

ii) Written communication

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Report writing.	Project supervisions.	Assessed reports.
Mathematical communication	Tutorials.	Assessed questions.

iii) Information technology

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Use of Windows. Use of specialist packages. Office software.	Induction. Laboratories.	Marked project work. Project reports.

iv) Numeracy

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Use of analytical and graphical methods.	Throughout	Written examinations, project reports.

v) Team working

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Scientific discussion. Organization, time management	Group problem solving. Group projects.	Group assessment (including peer assessment).

vi) Problem solving

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Analysis, breakdown, synthesis, critical examination. Mathematical modelling skills.	Lectures, problem workshops, group work, projects.	Marked problems, group work assessment, project assessment.

vii) Information handling

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Conduct background research and literature surveys. Summarise content from information sources.	Project supervision.	Individual and group project reports.
Ability to learn from e-learning resources.	Blackboard stored e-learning resources.	Some assessed material only provided through e-learning resources.

viii) Skills for lifelong learning

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Study skills.	Resource based learning. Study skills booklet.	Examinations, assessed problems, project assessments.
Independence and time management.	Structured support decreasing through years.	Meeting deadlines.
Careers and business awareness.	Guest speakers.	
Information retrieval.	Induction library session. Study skills handbook. Project supervision.	

10. Progression points

There are two progression points in each academic year: end of Semester 1 and end of Semester 2 of the DUT-DLI teaching calendar. A progression decision is made by the DLI Board of Examiners on the basis of the Semester 1 exam/resit results in March and Semester 2 exam/resit results in July each year. Where it is known following Semester 1 that a student has not met the requirements to progress to the next year, they may be required to suspend their studies at that stage.

Students who fail any modules in year 1 will be eligible for one re-sit of the assessment. The timing of this re-sit will depend on the semester in which the module is taught.

General

As the Year 1 of the DLI programme is below the level of entry for HE in the UK, a specific scheme of progression has been designed to ensure that students have evidenced required English language and academic capabilities to study the substantive element of the programme.

Year 1 of the DLI programme consists of courses in English for Academic Purposes (EAP), counting for 60 credits, and subject related theory courses counting for 60 credits, totalling 120 credits.

A student who passes all 120 UoL credits in Year 1 will proceed to Year 2 of the DLI programme. A minimum of 90 credits must be passed in Year 1 for progression to Year 2.

Students who fail any modules in Year 1 will be eligible for one re-sit of the assessment. The timing of this re-sit will depend on the semester in which the module is taught. Further re-sit attempts will be considered and offered at the DLI Progression Board at the discretion of the Board in line with the UoL Senate Regulations, with a balanced view of the academic performance across the subject modules throughout the academic year(s), academic demands/challenges from future subject modules in the subsequent year(s) and the category of the failed module (qualifying or non-qualifying). The maximum number of times any assessment may be attempted is three, except in such cases where a Mitigating Circumstances Panel has made an alternative recommendation on the basis of accepted mitigating circumstances.

English for Academic Purposes (EAP Modules) (60 credits):

As DLI programmes are delivered in English, the EAP modules are pre-requisite and qualifying for courses throughout Year 2-4 of the DLI programme. To progress between Year 1 and Year 2 of the DLI programmes, the DLI students are required to pass all the following language modules at the relevant pass mark (40.00%):

- EL0002
- EL0003
- EL0004
- EL0005

Compensated pass is not available for these modules.

FAIL EAP Modules: Resit EAP Modules

- Students who have failed to pass all the EAP modules can be offered ONE re-sit attempt at the next re-sit opportunity available.
- Students who thenpass the EAP modules at this stage and meet other progression requirements as set out below, will be permitted to proceed.

FAIL Re-Sit EAP Assessment: REPEAT Year
- Students who have failed EAP modules after one re-sit attempt can be offered a Repeat Year of the Year 1 of the DLI programme in the subsequent academic year.
- Students who subsequently fail the resit EAP modules in a Repeat Year (after a reassessment attempt) will have their course of studies terminated.

Theory Modules (60 Credits)

The Theory Modules offered at Year 1 of the DLI programme are designed to provide the students with the technical skills and knowledge demanded for the relevant degree courses; and thus, the DLI students will be required to pass all Theory Modules in order proceed to the next level of the DLI programme.

Student who passes all 120 UoL credits in Year 1, i.e. who have passed all the EAP modules (60 credits) and all the Theory Modules (60 credits) in Year 1, will proceed to Year 2 of the DLI programme. A minimum of 90 credits must be passed in Year 1 for progression to Year 2.

Students who have failed no more than 30 credits of non-qualifying theory modules after a reassessment attempt will be permitted to proceed to Year 2 of the programme. The Board of Examiners may, at its discretion, offer a third and final attempt at any failed modules (progression from Year Two to Year Three will not be dependent on the outcome of this reassessment).

Students who have failed no more than 30 credits, but have failed qualifying theory modules after a reassessment attempt, will not be permitted to progress to Year 2 of the DLI programme and will be offered a Repeat Year. Students who subsequently fail a qualifying theory module in a Repeat Year (after a reassessment attempt) will have their course of studies terminated.

Students who have failed more than 30 credits of theory modules in the Year 1, following re-sit, will not be permitted to proceed on the programme, and will be offered a Repeat Year. Students who subsequently fail the resit theory modules in a Repeat Year (after a reassessment attempt) will have their course of studies terminated.

Failure to proceed on the dual DUT/UoL programme

A student who fails to meet the above requirements, following any permissible re-sit opportunities and repeat year, will not be permitted to proceed on the dual DUT/UoL programme.

Students in this position will not be eligible for transfer to another UoL programme. Any transfer onto alternative programmes offered by DUT will be at the discretion of that institution.

The progression for the other years follows the standard Scheme of Progression set out in Senate Regulations – see the version of Senate Regulation 5 governing undergraduate programmes relevant to the year of entry.

Students entering the programme in 2024/25 will be on the regulations for students entering in 2025/26 for Years 2-4 of the programme to ensure parity with their UoL counterparts.

a) Course transfers

Students not satisfying the UoL progression requirements may be allowed to transfer onto DUT programmes.

Students satisfying the UoL progression requirements may be allowed to transfer to the University of Leicester campus-based BSc degree programme, subject to capacity and physical resource limitations on the UoL campus.

11. Criteria for award and classification

This programme follows the standard scheme of undergraduate award and classification set out in Senate Regulations – see the version of *Senate Regulation 5 governing undergraduate programmes* relevant to the year of entry.

12. Special features

Programme delivered entirely in English, UK-style facilities provided on Panjin campus, Small group tutorials via video conferencing, group problem solving, research based projects, problem based learning, Reflect lecture capture.

12a. Research-inspired Education

Students on this programme will advance through the four quadrants of the University of Leicester Research-inspired Education Framework as follows:

RiE Quadrant	Narrative
	The programme aims to teach fundamental concepts and develop the ability to model the world using mathematics and to produce relevant and robust solutions to real world problems. Furthermore, the programme provides students with direct experience of a UK degree programme, and enhances their English language skills.
Research-briefed Bringing staff research content into the curriculum.	*Research-briefed:* Students will be exposed to a number of fundamental concepts and methods all of which are actively being used as foundations of current research, as well as of industry. For each of these concepts and theories the students will be shown how to apply and reproduce main theorems, and introduced to a range of subjects such as linear algebra, calculus, probability, and statistics.
Research-based Framed enquiry for exploring	*Research-based:* During problem classes, students will have an opportunity to put in practice their ability to: generalise and specialise applications of basic knowledge, apply algorithms and theorems for the solution of specific problems.

existing knowledge. **Research-oriented** Students critique published research content and process. **Research-apprenticed** Experiencing the research process and methods; building new knowledge.	*Research-oriented:* Students will be able to conduct background research and literature surveys, and summarise content from information sources. They will use e-learning resources. Students will apply their acquired knowledge to analyse models and provide a critical appraisal of solutions. *Research-apprenticed:* Students will work individually or in groups to conduct research or to identify a problem that can be solved with the implementation of advanced mathematical, data science, and analytical skills. Students will have the opportunity to present their work and process, and be challenged on choices that they made throughout the development of the project.

As part of studying at a research-intensive university, students on this programme have the following extra or co-curricular opportunities available to them to gain exposure to research culture:

DLI Mathematics students are part of a joint-award degree programme by University of Leicester (UoL) and Dalian University of Technology (DUT) which is a research-intensive university. Graduates are awarded mathematics degrees from both institutions. They are based at the Panjin Campus, and as DUT students they have access to the extra or co-curricular research culture opportunities available there. As UoL students, they can access the extra or co-curricular research culture opportunities available to Leicester-based students, such as the Career development support team.

Teaching on this programme will be research-informed (it draws consciously on systematic inquiry into the teaching and learning process itself) in the following way:

All UoL-based module convenors are part of teaching pods, which group similar fields together. These pods are designed to provide a forum for discussion between teaching-focussed and teaching/research staff, and as a way for more experienced staff to support others by, for example, peer observation and feedback. This provides a platform for staff to share considerations and observations of their teaching experience and obtain research-based input.

The UoL-based teaching staff meet once a year for a 'Teaching Away Day', which gives the opportunity to discuss some key issues in depth with the other members within the teaching pods, and shared with everyone. This gives a chance to share ideas and experience, and to identify questions that need answers.
Additionally, staff will be paired within their teaching pods to observe each other's teaching sessions then meet to agree actions in order to participate in UoL's Peer Observation of Teaching scheme.

The School supports all staff involved in teaching to gain an accredited Higher Education teaching qualification, in which they demonstrate their use of teaching theory to support their own practice and reflect on their current teaching and continuing professional development.

13. Indications of programme quality

Positive comments from external examiner.

14. External Examiner(s) reports

The details of the External Examiner(s) for this programme and the most recent External Examiners' reports for this programme can be found at exampapers@Leicester [log-in required]

UNIVERSITY OF LEICESTER

Programme Specification (Undergraduate) FOR ENTRY YEAR: 2026/27

Date created: n/a **Last amended:** 18/03/2026 **Version no.** 1

Appendix 1: Programme structure (programme regulations)

The University regularly reviews its programmes and modules to ensure that they reflect the current status of the discipline and offer the best learning experience to students. On occasion, it may be necessary to alter particular aspects of a course or module.

Updates to the programme

Academic year	Module	Change
2027/28	MA1061 Probability	New core module
	MA1202 Introductory Statistics	New core module
	MA1300 Fundamentals of University Mathematics	Core module removed
	MA1261 Probability and Statistics	Core module removed
2028/29	MA2206 Statistical Data Analysis	New core module
	MA2403 Statistical Distributions and Inference	Core module removed

BSc Mathematics

Level 3/Year 1 2026/27

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	60 credits

Status	Year long	Semester 1	Semester 2
Optional	n/a	n/a	60 credits

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	EL0002	UNIVERSITY ENGLISH 1: SPEAKING AND LISTENING	15 credits
Sem 1	EL0003	UNIVERSITY ENGLISH 2: READING AND WRITING	15 credits
Sem 2	EL0004	UNIVERSITY ENGLISH 3: PROJECT	15 credits
Sem 1	MA0006	INTRODUCTION TO MATHEMATICAL SCIENCE	15 credits
Sem 1	MA0009	INTRODUCTION TO COMPUTER PROGRAMMING 1	15 credits
Sem 2	EL0005	ENGLISH FOR SPECIFIC ACADEMIC PURPOSES	15 credits
Sem 2	MA0010	INTRODUCTION TO COMPUTER PROGRAMMING 2	15 credits
Sem 2	MA0007	ANALYTIC GEOMETRY	15 credits

Notes

Additional Non-Credit Bearing Modules

Delivery period	Code	Title	Credits
Sem 1		MORAL CULTIVATION AND BASIC LAW	n/a
Sem 1		PHYSICAL EDUCATION I	n/a
Sem 1		MILITARY THEORY AND TRAINING	N/A
Sem 2		CHINESE MODERN CONTEMPORARY HISTORY AND SITUATION POLICY	N/A
Sem 2		MILITARY THEORY AND TRAINING	N/A
Sem 2		PRINCIPLE OF MARXISM	N/A

Level 4/Year 2 2027/28

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	60 credits	30 credits	30 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	MA1015	Calculus and Analysis 1	15 credits
Sem 2	MA1016	Calculus and Analysis 2	15 credits
Sem 1	MA1115	Linear Algebra 1	15 credits
Sem 2	MA1116	Linear Algebra 2	15 credits
Sem 1	MA1061	Probability	15 credits
Sem 2	MA1202	Introductory Statistics	15 credits
Sem 1	CO1107	Algorithms, Data Structures and Advanced Programming	15 credits
Sem 2	Co1109	Business And Financial Computing	15 credits

Notes
N/A

Additional Non-Credit Bearing Modules

Delivery period	Code	Title	Credits
Sem 1		MARXISM	n/a
Sem 1		EXTENSION OF CALCULUS AND ANALYSIS	n/a

Delivery period	Code	Title	Credits
Sem 1		DUT OPTIONAL MODULE	N/A
Sem 1		PHYSICAL EDUCATION II	N/A
Sem 2		MAO ZEDONG THOUGHTS AND THE SYSTEM OF THEORY OF SOCIALISM WITH CHINESE CHARACTERISTICS	N/A
Sem 2		EXTENSION OF CALCULUS AND ANALYSIS 2	N/A
Sem 2		PHYSICS I	N/A
Sem 2		LANGUAGE AND SKILLS SUPPORT	N/A
Sem 2		XI JINPING'S SYSTEM OF THEORY OF SOCIALISM WTH CHINESE CHARACTERISTICS	N/A

Level 5/Year 3 2028/29

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	60 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	MA2252	INTRO TO COMPUTING	15 credits
Sem 1	MA2032	VECTOR CALCULUS	15 credits
Sem 1	MA2132	ADVANCED LINEAR ALGEBRA	15 credits
Sem 1	MA2041	MATHEMATICAL FOUNDATION OF MACHINE LEARNING	15 credits
Sem 2	MA2404	MARKOV PROCESSES	15 credits
Sem 2	MA2133	ALGEBRA	15 credits

Delivery period	Code	Title	Credits
Sem 2	MA2206	STATISTICAL DATA ANALYSIS	15 credits
Sem 2	MA2021	DIFFERENTIAL EQUATIONS	15 credits

Notes
N/A

Additional Non-Credit Bearing Modules

Delivery period	Code	Title	Credits
Sem 1		PHYSICS II & LAB	n/a
Sem 2		PROCESS MACHINERY AND EQUIPMENT	n/a
Sem 2		REAL ANALYSIS	n/a

Level 6/Year Final 2029/30

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	60 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	MA3007	OPERATIONAL RESEARCH	15 credits
Sem 1	MA3002	EQUATIONS OF MATHEMATICAL PHYSICS	15 credits
Sem 1	MA3012	SCIENTIFIC COMPUTING	15 credits
Sem 1	MA3071	FINANCIAL MATHEMATICS	15 credits

Delivery period	Code	Title	Credits
Sem 2	MA3022	DATA MINING AND NEURAL NETWORKS	15 credits
Sem 2	MA3121	COMPLEX ANALYSIS	15 credits
Sem 2	MA3516	MATHEMATICS PROJECT	30 credits

Notes
n/a

Appendix 2: Module specifications

See undergraduate module specification database [login required] (Note - modules are organized by year of delivery).