Programme Specification (Undergraduate) FOR ENTRY YEAR: 2025/26

Date created: n/a **Last amended:** 04/07/2025 **Version no.** 1

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

BEng Mechanical Engineering

Dip HE Mechanical Engineering*

Cert HE Mechanical Engineering*

* An award marked with an asterisk is only available as an exit award and is not available for students to register onto.

a) HECOS Code

HECOS Code	%
100190	100

b) UCAS Code (where required)

H300

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:

Bachelor of Engineering (Mechanical)

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

All the variants of the programmes aim to satisfy the criteria of the accrediting engineering institutions in preparation for future application of the accreditation. These are based on the Engineering Council's Accreditation of Higher Education Programmes (AHEP) learning outcomes. These are defined in 6 overarching outcomes:

- Science and Mathematics (SM),
- Engineering Analysis (EA),
- Design (D),
- Economic, Legal, social, ethical and environmental context (EL)
- Engineering Practice (P)
- Additional General Skills (G).

Programme-level Intended Learning Outcomes for the degree programmes are mapped, using the shorthand codes above, to these overarching outcomes in section 9 - Programme Outcomes below. Each of these overarching outcomes is divided into a maximum of 11 specific outcomes (e.g. P1 – P11). These are mapped to module-level Intended Learning Outcomes and assessment elements, and are detailed in the module specifications.

The BEng programme aims to

1. provide a curriculum that is enjoyable and motivating and which creates enthusiasm for engineering through the challenge of responding to interesting engineering problems;
2. provide students with the breadth of understanding in relevant science and mathematics to allow analysis and design of Mechanical Engineering systems that improve quality of life through being able to integrate knowledge from other engineering disciplines.
3. develop students' knowledge and understanding of the tools and techniques used for modelling, analysis, design and control of complex Mechanical engineering systems;
4. develop students' detailed knowledge and understanding of engineering applications used in research and industry;
5. cultivate the synergy between teaching and research; and
6. foster students' independent learning and organisational skills.

8. Reference points used to inform the programme specification

- QAA Benchmarking Statement
- Framework for Higher Education Qualifications (FHEQ)
- UK Quality Code for Higher Education
- Engineering Accreditation Board (EAB) Bachelors and Integrated Masters Degree Learning Outcomes (AHEP 3rd Edition)
- UK-SPEC (UK Standard for Professional Engineering Competence)
- Engineering Council Compensation and Condonement requirements November 2018.
- University Education Strategy
- University Assessment Strategy
- 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?
Apply knowledge of mathematics, statistics, natural science and engineering principles to the solution of complex problems. Some of the knowledge will be at the forefront of General Engineering (C1).	Lectures, tutorials, seminars, laboratory practical, directed reading, independent research, resource-based learning	Examinations, laboratory reports, oral and poster presentations, contributions to discussions, problem-based exercises, design tasks, simulation exercises, group report, project report.

ii) Understanding and application of key concepts and techniques

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Select and apply appropriate computational and analytical techniques to model complex problems, recognising the limitations of the techniques employed. (C3)	Lecture, tutorial, computer practical class, laboratory practical	Examination, laboratory report, oral and poster presentation, contribution to discussion, problem-based exercise, design task, simulation exercise, group report, project report.
Design solutions for complex problems that meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and industry standards. (C5)	Lecture, tutorial, problem solving class, independent project, group project, project supervision.	Examination, laboratory report, oral and poster presentation, contribution to discussion, problem-based exercise, design task, simulation exercise, group report, project report.
Use practical laboratory and workshop skills to investigate complex problems. (C12, M12)	Lecture, tutorial, independent research, laboratory practical, computer practical class, project supervision.	laboratory report, oral and poster presentation, design task, group report, project report.
Select and apply appropriate materials, equipment, engineering technologies and processes, recognising their limitations. (C13, M13)	Laboratory practical, group research project, independent research project, design task.	Laboratory report, written assignment, work placement report, design report, project report.
Discuss the role of quality management systems and continuous improvement in the context of complex problems. (C14, M14)	Lecture, tutorial, independent research, project supervision, work placement, design tasks, individual and group project.	Laboratory report, written assignment, work placement report, design report, group report.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Apply knowledge of engineering management principles, commercial context, project and change management, and relevant legal matters including intellectual property rights. (C15, M15)	As above.	As above.

iii) Critical analysis of key issues

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Analyse complex problems in General Engineering to reach substantiated conclusions using first principles of mathematics, statistics, natural science and engineering principles. (C2)	Lecture, tutorial, problem solving class computer practical class, example sheet, coursework assignment, oral and poster presentation.	Examination, laboratory report, oral and poster presentation, contribution to discussion, problem-based exercise, design task, simulation exercise, group report, project report
Apply an integrated or systems approach to the solution of complex problems. (C6, M6)	Design task, laboratory practical, simulation exercise, independent project, group project, industrial/research seminars.	Problem solving exercise, simulation, design-and-build task, independent research, group report, oral and poster presentations, project report.
Evaluate the environmental and societal impact of solutions to complex problems and minimise adverse impacts. (C7)	Lecture, design task, laboratory practical, simulation exercise, group project, independent project, industrial/research seminar.	Work placement report, simulation exercise, project report, coursework assignment, oral and poster presentation, group report.
Identify and analyse ethical concerns and make reasoned ethical choices informed by professional codes of conduct. (C8, M8)	Lecture, work placement, independent research, group project, independent project.	Work placement report, project report, oral and poster presentation, group report.
Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity. (C9, M9)	Lecture, tutorial, problem solving exercise, independent research project, group project, Design task, industrial/research seminar.	Design review and presentation, laboratory (and/or work placement) report, coursework assignment, oral and poster presentation, group project, independent project.
Adopt a holistic and proportionate approach to the mitigation of security risks. (C10, M10)	Lecture, tutorial, independent research, group project, laboratory practical, computer laboratory practical.	Coursework assignment, oral and poster presentation, group project, project report, design review and presentation.

iv) Clear and concise presentation of material

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Communicate effectively on complex engineering matters with technical and non-technical audiences. (C17)	Tutorial, group project, independent research, project supervision.	Oral and poster presentation, portfolio, Written assignments, laboratory report, essay, project report, group report.

v) Critical appraisal of evidence with appropriate insight

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Select and evaluate technical literature and other sources of information to address complex problems. (C4)	Tutorial, independent project, group project, laboratory practical.	Project report, group project, coursework assignments, oral and poster presentation, lab report.
Select and apply appropriate computer-based methods for modelling and analysing engineering problems. (C13, M13)	Computer laboratory practical, group research project, independent research project, design task.	Laboratory report, written assignment, work placement report, design report, group report, project report.
Evaluate customer and user needs taking into account the wider engineering context. (C5, M5)	Design task, laboratory practical, simulation exercise, group project, work placement, independent project.	Problem solving exercise, simulation, project report, group report, lab report.
Create and design new processes or products to fulfil a specified requirement through synthesis of ideas from a wide range of sources. (C5, M5, C6, M6)	As above.	As above.
Perform practical testing, technical analysis and critical evaluation of design ideas in laboratory or through simulation. (C3, M3, C12, M12)	As above.	Laboratory examination, laboratory report, simulation report.

vi) Other discipline specific competencies

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Adopt an inclusive approach to engineering practice and recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion. (C11, M11)	Lecture, tutorial, independent research, group project, design task.	Coursework assignment, oral and poster presentation, group project, project report, design review and presentation, reflective report, job application exercise.
Select and use appropriate experimental procedure, and measurement instrumentation (C12, M12, C13, M13).	Laboratory practical, group research projects, independent research project.	Laboratory reports, examinations, projects reports.
Demonstrate knowledge and understanding of manufacturing and/or operational practice (C12, M12, C13, M13).	Manufacturing skills programme, work placement.	Laboratory report, practical demonstration, group report, written assignment, work placement report.
Apply understanding of codes of practice related to hazards and operational safety to ensure good working practices and effective risk management (C5, M5, C8, M8, C9, M9, C10, M10).	Laboratory practicals, design tasks, independent research.	As above.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
[BSc, DipHE, CertHE only] Demonstrate partial achievement of the full set of Engineering Council learning outcomes by meeting the University award criteria, whilst falling short of demonstrating the more stringent minimum requirements specified by the Engineering Council.	All teaching and learning methods detailed above.	Assessments common with BEng/MEng programmes but with failures in individual modules.

b) Transferable skills

i) Oral communication

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Present technical and business information orally, in an appropriate form for a given audience). (C17, M17)	Tutorials, group projects, independent research, project supervision.	Oral presentations, portfolio.

ii) Written communication

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Communicate business and technical information in an appropriate written form for a given audience (D).	Lectures, group projects, independent research, project supervision.	Written assignments, laboratory reports, essays, independent project reports.
Report on a practical or simulation test of a design solution including analysis and discussion of the results (D).	Lectures, group projects, independent research, project supervision.	Written assignments, laboratory reports, essays, independent project reports.
Communicate business and technical information in an appropriate written form for a given audience. (C17, M17)	Lectures, group projects, independent research, project supervision.	Written assignment, laboratory report, essay, project report, group report.
Report on a practical or simulation test of a design solution including analysis and discussion of the results. (C17, M17)	As above.	As above.

iii) Information technology

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Use standard and specialist engineering IT software confidently to conduct and report on engineering analysis and projects. (C12, M12)	Lectures, group projects, independent research, project supervision.	Written assignment, laboratory report, essay, project report, group report.

iv) Numeracy

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Manipulate and sort data to generate new data sets. (C2)	Problem-solving classes, research projects.	Computer-based exercise, written assignment, project report.
Manipulate and present data in alternative formats to create deeper understanding or greater impact. (M2)	As above.	As above.

v) Team working

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Function effectively as an individual, and as a member or leader of a team. (C16)	Tutorials, masterclass, project supervision, induction programmes, group projects.	Learning log/diary, learning portfolio, group report, reflective report.

vi) Problem solving

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Solve problems through the integration of knowledge of mathematics, science, information technology, design, business context and engineering practice (C1, M1).	Project supervision, lectures, tutorials, example sheets, simulation exercises, laboratory-based exercise, computer- based exercises, independent research project, group project.	Project report, oral and poster presentation, group reports, problem-based examination, practical demonstration.
Select and analyse appropriate evidence to solve non-routine problems (). (C2, M2)	As above.	As above.
Use systematic analysis and design methods to solve problems in unfamiliar situations. (C3, M3)	As above.	As above.
Use creativity and innovation to solve problems (C5, M5).	As above.	As above.
Apply standard management techniques to plan and allocate resources to projects (C9, M9, C15, M15).	As above.	As above.

vii) Information handling

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Select and apply scientific evidence based methods in the solution of problems (C1, M1, C4, M4).	Lectures, tutorials, example sheets, simulation exercises, laboratory based exercises, computer-based exercises, independent research projects, group projects.	Individual research projects, oral presentations, project reports, problem-based examinations, practical demonstrations.
Search for information related to design solution, evaluate it and suggest requirements for additional information (C4, M4).	Lectures, tutorials, example sheets, simulation exercises, laboratory based exercises, computer-based exercises, independent research projects, group projects.	Individual research projects, oral presentations, project reports, problem-based examinations, practical demonstrations.
Plan and manage the design process, including cost drivers and evaluate outcomes (C15, M15)	Lectures, tutorials, example sheets, simulation exercises, laboratory based exercises, computer-based exercises, independent research projects, group projects.	Individual research projects, oral presentations, project reports, problem-based examinations, practical demonstrations.

viii) Skills for lifelong learning

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Demonstrate knowledge and understanding of the professional and ethical responsibilities of an engineer and legal requirements (EL).	Work placement, simulation exercises, independent research.	Work placement report, simulation exercises, reports, independent projects.
Learn independently and understand new concepts in the discipline readily (G).	Independent research projects, group research projects,	Work placement report, independent project report, learning logs/diaries, learning portfolios.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Develop and implement personal plan of work to meet a deadline. Identify the critical activities within a personal plan of work (G).	Independent research projects, group research projects.	Work placement report, independent project report, learning logs/diaries, learning portfolios.
Exercise initiative and personal responsibility, which may be as a team member or as a leader (P, G).	Independent research projects, group research projects, work placement.	Work placement report, independent project report, learning logs/diaries, learning portfolios.
Explore career development opportunities (G)	Masterclasses, learning portfolios, work placement	Learning portfolios
Demonstrate knowledge and understanding of the professional and ethical conduct of an engineer and legal requirements (C8, M8)	Lecture, Independent research project, group research project, work placement.	Work placement report, project report, oral and poster presentation, group report.
Exercise initiative and personal responsibility, which may be as a team member or as a leader (C16, M16).	Masterclasses, learning portfolios, work placement, group project.	Learning portfolios, reflective report.
Learn independently and understand new concepts in the discipline readily (C18, M18).	Independent research project, group research project, work placement.	Work placement report, project report, learning logs/diary, learning portfolio.
Develop and implement personal plan of work to meet a deadline and identify the critical activities (C18, M18).	Independent research project, group research project, work placement.	Work placement report, project report, learning log/diary, learning portfolio.
Plan and record self-learning and development as the foundation for lifelong learning/CPD. (C18, M18)	Work placement, independent research project, group project.	Work placement report, project report, reflective report.
Explore career development opportunities (C18, M18).	Masterclass, learning portfolio, work placement.	Learning portfolio.

10. Progression points

Progression from Year 1 to Year 2

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) and academic demands/challenges from future subject modules in the subsequent year(s). 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 for courses throughout Year 2-4 of the DLI programme. In order to progress between Year 1 and Year 2 of the DLI programmes, students will be required to pass all language modules at the relevant pass mark (40%). Compensated pass is not available for these modules.

FAIL EAP Modules: Resit EAP Modules

- Students who have failed to pass all of the EAP modules can be offered ONE re-sit attempt at the next available re-sit opportunity.
- Students who have passed 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.

Students 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.

Students who have failed no more than 30 credits of 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 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.

EG2006 has no resit option so must be passed at the first attempt

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 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.

The following module on this programme is not eligible for compensation and must be passed at the relevant pass mark (40% at Levels 4-6):

> EG3005 - Individual Project

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
Research-briefed Bringing staff research content	The DLI Mechanical Engineering programme provides students with cutting-edge aspects of mechanical engineering. The programme is delivered by top-tier engineers and instructors from the University of Leicester and Dalian University of Technology, complemented by contributions from distinguished academics and professionals from leading global institutions. This collaborative effort provides students with opportunities to engage in innovative and advanced research projects in mechanical engineering. • **Research-briefed**: Academics actively incorporate their latest research findings and technological advancements into teaching and learning resources. This allows students to explore case studies, research papers, and cutting-edge developments, providing context and relevance by connecting theoretical engineering concepts to real-world applications and societal challenges.

into the curriculum. **Research-based** Framed enquiry for exploring existing knowledge. **Research-oriented** Students critique published research content and process. **Research-apprenticed** Experiencing the research process and methods; building new knowledge.	• **Research-based:** Lectures, practical exercises, and assessments are grounded in real-world engineering challenges. These activities emphasize experimental analyses, numerical simulations, and data evaluation to enhance problem-solving and critical thinking skills. • **Research-oriented:** Students are trained to critically evaluate their own data and analyses while developing skills in interpreting and appraising published research. This is achieved through guided seminars, assessments, and hands-on exercises aimed at fostering independent, analytical thinking. • **Research-apprenticed:** Comprehensive training is provided in essential research skills, including report writing, group collaboration, presentation techniques, and the use of research tools such as library resources and reference management software. Students apply these skills through individual reports, group presentations, and collaborative poster projects, gaining hands-on experience in communicating research findings effectively. This programme equips students with the knowledge and skills to excel in mechanical engineering, fostering a strong foundation for innovation and professional growth.

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:

Students in the DLI Mechanical Engineering programme gain valuable exposure to the research culture of engineering schools in both countries through hands-on laboratory work. This immersive experience bridges theoretical knowledge with practical application, fostering a deep understanding of engineering principles.

For instance, modules such as EG1031, EG1041, EG1121, and EG1122 incorporate 20% lab-based learning, with practical activities focused on solid mechanics, fluid mechanics, and electronics engineering. These laboratory sessions contribute 20% to the final assessment, ensuring students develop real-world technical skills and problem-solving abilities in a controlled, research-oriented environment.

Beyond the classroom, students actively engage in engineering-focused extracurricular activities. They lead and participate in initiatives such as Formula Student, where they design and

manufacture a racing car under real-world design constraints, honing their creativity, teamwork, and engineering expertise.

In addition, students compete in prestigious events like China's Challenge Cup, the nation's highest-level engineering and science competition for university students. These opportunities allow students to showcase their innovation, technical skills, and leadership on a national and international stage, preparing them for successful careers in engineering and beyond.

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:

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.

The good practices in research-informed teaching pedagogy are disseminated to module convenors through the School's teaching away day, peer observation of teaching, and via central email communications. Academics are encouraged to participate in the yearly teaching and learning conference held at the university. Curriculum delivery is routinely discussed in the Education Committee and meetings between education and programme directors.

13. Indications of programme quality

Normal University academic quality assurance processes are used to continuously review and improve the programmes. The last major review and re-structure of the programmes was during institutional Curriculum Transformation process, resulting in the current programmes structures being applied to students entering from academic year 2018/2019.

All of the current BEng courses delivered at the University of Leicester are accredited by the appropriate professional engineering institutions. It is our intention to seek accreditation from the EAB for this BEng Mechanical Engineering programme during the next accreditation review.

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: 2025/26

Date created: n/a **Last amended:** 04/07/2025 **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	EG2112 Dynamics and Thermofluids	Core module removed
2027/28	EG2004 Engineering Experimentation and Analysis	Core module removed
2027/28	EG2008 Engineering Management and Business Simulation	New core module
2027/28	EG2006 Integrated Engineering Design	Core module changed from 30 to 15 credits
2027/28	EG2132 Fluid Dynamics and Aerodynamics	New core module
2027/28	EG2113 Dynamics and Vibrations	New core module
2028/29	EG3008 Engineering Management	Core module removed
2028/29	EG3111 Finite Element Analysis and Design	Was optional, now core
2028/29	EG3323 Digital Control and Actuators	Was core, now optional, and moved to Sem 1
2028/29	EG3125 Rigid Body and Structural Dynamics	Was optional, now core

BEng Mechanical Engineering
Level 3/Year 1 2025/26

Credit breakdown

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

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	EG0280	ADVANCED MATHEMATICS I	15 credits
Sem 2	EL0005	ENGLISH FOR SPECIFIC ACADEMIC PURPOSES	15 credits
Sem 2	EG0281	ADVANCED MATHEMATICS II	15 credits
Sem 1	EG0282	MECHANICAL ENGINEERING FOUNDATION	15 credits
Sem 2	EG0283	ELECTRONIC AND ELECTRICAL ENGINEERING FOUNDATION	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

Delivery period	Code	Title	Credits
Sem 1		MILITARY THEORY AND TRAINING	N/A
Sem 2		CHINESE MODERN CONTEMPORARY HISTORY AND SITUATION POLICY	N/A
Sem 2		PHYSICAL EDUCATION II	N/A
Sem 2		DUT GENERAL OPTIONAL MODLE I	N/A
Sem 3		COLLEGE STUDENT MENTAL HEALTH AND HEALTH EDUCATION	N/A

Level 4/Year 2 2026/27

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	30 credits	45 credits	45 credits
Optional	n/a	n/a	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	EG1203	PRINCIPLES OF ELECTRICAL ENGINEERING	15 credits
Sem 2	EG1007	SUSTAINABLE ENGINEERING DESIGN	15 credits
Sem 2	EG1102	THERMODYNAMICS AND HEAT TRANSFER	15 credits
Sem 1	EG1122	DIGITAL ELECTRONICS, SENSORS AND COMMUNICATONS	15 credits
Sem 1	EG1280	ENGINEERING MATHEMATICS I	15 credits
Sem 1	EG1031	SOLID MECHANICS	15 credits
Sem 2	EG1041	FLUID MECHANICS	15 credits
Sem 2	EG1281	ENGINEERING MATHEMATICS II	15 credits

Notes
N/A

Additional Non-Credit Bearing Modules

Delivery period	Code	Title	Credits
Sem 1		PRINCIPLE OF MARXISM AND THEORY OF SOCIALISM	n/a
Sem 1		ENGINEERING TRAINING	n/a
Sem 2		DUT GENERAL OPTIONAL MODULE II	N/A
Sem 3		ON-SITE VISITING PRACTICE	N/A

Level 5/Year 3 2027/28

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	EG2111	MATERIALS & STRUCTURES	15 credits
Sem 1	EG2302	SYSTEM DYNAMICS AND CONTROL	15 credits
Sem 1	EG2121	MATERIALS PROCESSING	15 credits
Sem 2	EG2008	ENGINEERING MANAGEMENT AND BUSINESS SIMULATION	15 credits
Sem 2	EG2006	INTEGRATED ENGINEERING DESIGN	15 credits
Sem 2	EG2122	APPLIED ENGINEERING THERMODYNAMICS	15 credits

Delivery period	Code	Title	Credits
Sem 2	EG2132	FLUID DYNAMICS AND AERODYNAMICS	15 credits
Sem 1	EG2113	DYNAMICS AND VIBRATIONS	15 credits

Notes
N/A

Additional Non-Credit Bearing Modules

Delivery period	Code	Title	Credits
Sem 1		DUT GENERAL OPTIONAL MODULE III	n/a
Sem 2		PROCESS MACHINERY AND EQUIPMENT	n/a
Sem 2		PROCESS PRINCIPLE AND EXPERIMENT I	n/a
Sem 3		PRODUCTION PRACTICAL	n/a

Level 6/Year Final 2028/29

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	45 credits
Optional	n/a	15 credits	n/a

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	EG3313	STATE VARIABLE CONTROL	15 credits
Sem 2	EG3125	RIGID BODY & STRUCTURAL DYNAMICS	15 credits

Delivery period	Code	Title	Credits
Sem 1	EG3112	HEAT TRANSFER AND ENERGY SYSTEMS	15 credits
Sem 1	EG3124	TRIBOLOGY IN ENGINEERING DESIGN	15 credits
Sem 1	EG3111	FINITE ELEMENT ANALYSIS AND DESIGN	15 credits
Sem 2	EG3005	FINAL YEAR PROJECT	30 credits

Notes
n/a

Option modules

Delivery period	Code	Title	Credits
Sem 1	EG3323	DIGITAL CONTROL & ACTUATORS	15 credits
Sem 1	EG3123	MACHINE LEARNING FOR ENGINEERS	15 credits
Sem 1	EG3422	AEROSPACE MATERIALS & STRUCTURES	15 credits

Notes
This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

Additional Non-Credit Bearing Modules

Delivery period	Code	Title	Credits
Sem 2		CAREER DEVELOPMENT	n/a

Appendix 2: Module specifications

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