Programme Specification (Undergraduate) FOR ENTRY YEAR: 2024/25

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

MEng Aerospace Engineering

MEng Aerospace Engineering with a Year in Industry

MEng Aerospace Engineering with a Year Abroad

BEng Aerospace Engineering

BEng Aerospace Engineering with a Year in Industry

BEng Aerospace Engineering with a Year Abroad

BSc Aerospace Engineering[$]

BSc Aerospace Engineering with a Year in Industry[$]

BSc Aerospace Engineering with a Year Abroad[$]

Dip HE Aerospace Engineering*

Cert HE Aerospace Engineering*

Notes

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

[$] An award marked with a dollar sign is not accredited with the Engineering Council, and is only available to students who have been transferred on to it at the end of year 2 by the exam board.

a) HECOS Code

HECOS Code	%
100115	100%

b) UCAS Code (where required)

Variant	UCAS code	Engineering Council ACAD
MEng (4yrs)	H401	9569
MEng with industry (5yrs)	H405	9570
MEng with Year Abroad (5yrs)	H402	9571
BEng (3yrs)	H400	9853
BEng with industry (4yrs)	H404	9854
BEng with Year Abroad (4yrs)	H403	9855

There is a foundation year option nominally for the General Engineering programme (H199) which gives students the option to switch to the other programmes.

2. Awarding body or institution:

University of Leicester

3. a) Mode of study

Full-time

b) Type of study

Campus-based

4. Registration periods:

MEng
Full-time
The normal period of registration for is four years
The maximum period of registration is six years

BEng
Full-time
The normal period of registration is three years
The maximum period of registration is five years

The 'with a Year in Industry' and 'with a Year Abroad' options of each degree would add one year to the normal and maximum periods of registration listed above.

For Foundation Year Variant:
The normal period of registration is four years (one year for the Foundation Year, with three years for the BEng)
The maximum period of registration is six years (one year for the Foundation Year, and five years for the BEng)

5. Typical entry requirements

MEng. Typical offer: ABB normally including Mathematics or equivalent non- A- level mathematics qualifications.

BEng. Typical offer: ABB normally including Mathematics or equivalent non- A- level mathematics qualifications.

For Foundation Year Variant:

A level: BBB or points equivalent from best three A levels typically in subjects outside of the 'usual' A levels expected by the department.
BTEC Diploma: DDM in appropriate subject area.
Access to HE courses in Science and Engineering: 45 L3 credits, including 30 at Distinction and remaining L3 credits at least at Merit.

For the aims, learning outcomes and application criteria for the GCSA Year Abroad please see https://le.ac.uk/study/undergraduates/courses/abroad

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.

For Foundation Year Variant:
n/a

7. Programme aims

All the variants of the programmes aim to satisfy the criteria of the accrediting engineering institutions. These are based on the fourth edition of the Engineering Council's Accreditation of Higher Education Programmes (AHEP4) learning outcomes. These are defined in 5 overarching engineering specific areas of learning:

- Science and Mathematics (C1, M1)
- Engineering Analysis (C2-C4, M2-M4)
- Design and Innovation (C5-C6, M5-M6)
- The Engineer and Society (C7-C11, M7-M11)
- Engineering Practice (C12-C18, M12-M18)

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 engineering specific areas of learning are divided into a maximum of 7 specific outcomes (e.g. C12 – C18). These are mapped to module-level Intended Learning Outcomes and assessment elements, and are detailed in the module specifications.

The BEng programmes aim 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 Aerospace 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 Aerospace engineering systems;
4. Develop students' detailed knowledge and understanding of engineering applications used in research and the Aerospace industry;
5. Cultivate the synergy between teaching and research;
6. Foster students' independent learning and organisational skills; and
7. Meet the needs of the appropriate professional institutions and satisfy the educational requirements for registration by the Engineering Council at CEng level.

The MEng programmes aim to develop greater depth and breadth of knowledge and the ability to apply methods critically and in ambiguous situations, to optimise new and developing Aerospace Engineering technology, to identify projects and technical potential and to lead engineering activities and teams by managing technical and commercial risks and through change.

For the "with Industry" variant only, these additional programme aims apply:

- Prepare students for career and training opportunities which relate to their degree – in both the private and public sectors, and voluntary organisations.
- Construct effective applications for placement opportunities
- Provide students the opportunity to recognise suitable plans for transitioning into the workplace

For the "with Year Abroad" variant only, these additional programme aims apply:

- Provide students with the opportunity to spend one year studying out of the UK to gain an international perspective on their discipline and experience of living and study in a different culture and possibly improve their language 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 4th Edition)
- UK-SPEC (UK Standard for Professional Engineering Competence)
- Engineering Council Compensation and Condonement requirements November 2021.
- Royal Aeronautical Society Accreditation Handbook Version 21.1 September 2021.
- University Education 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?
(a) Discipline specific knowledge and competencies		
(i) Mastery of an appropriate body of knowledge		
Apply knowledge of mathematics, statistics, natural science and engineering principles to the solution of complex problems, including aerodynamics, aircraft performance, flight dynamics, aircraft systems and avionics, structural analysis, materials and propulsion technologies. Some of the knowledge will be at the forefront of Aerospace Engineering. (C1)	Lecture, tutorial, seminar, laboratory practical, directed reading, independent research, resource-based learning.	Examination, laboratory report, oral and poster presentation, contribution to discussion, problem-based exercise, design task, simulation exercise, group report, project report.
[MEng only] Apply comprehensive knowledge of mathematics, statistics, natural science and engineering principles to the solution of complex problems. Much of the knowledge will be at the forefront of Aerospace Engineering informed by a critical awareness of new developments and the wider context of engineering. (M1)	As above.	As above.

ii) Understanding and application of key concepts and techniques

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(ii) Understanding and application of key concepts and techniques		
Select and apply appropriate computational and analytical techniques to model complex problems in Aerospace Engineering, 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.
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.
[with Industry or with Year Abroad only] Work as an engineer in an industrial [with Industry] or international setting [with Year Abroad].	Work/International placement	Work placement report/International Year Assessment.
[MEng only] Select and apply appropriate computational and analytical techniques to model complex problems, discussing the limitations of the techniques employed. (M3)	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.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Design solutions for complex problems that evidence some originality and 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. (M5)	Lecture, tutorial, problem solving class, independent project, group project, project supervision.	As above.

iii) Critical analysis of key issues

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(iii) Critical analysis of key issues		
Analyse complex problems in Aerospace 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.
[MEng only] Formulate and analyse complex problems to reach substantiated conclusions. This will involve evaluating available data using first principles of mathematics, statistics, natural science and engineering principles, and using engineering judgment to work with information that may be uncertain or incomplete, discussing the limitations of the techniques employed. (M2)	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.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Evaluate the environmental and societal impact of solutions to complex problems (to include the entire life cycle of a product or process) and minimise adverse impacts. (M7)	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.

iv) Clear and concise presentation of material

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(iv) Clear and concise presentation of material		
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.
[MEng only] Communicate effectively on complex engineering matters with technical and non-technical audiences, evaluating the effectiveness of the methods used. (M17)	As above.	As above.

v) Critical appraisal of evidence with appropriate insight

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(v) Critical appraisal of evidence with appropriate insight		
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.
[MEng only] Select and critically evaluate technical literature and other sources of information to solve complex problems. (M4)	Tutorial, independent project, group project.	Independent project, group project, coursework assignment, oral and poster presentation.

vi) Other discipline specific competencies

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(vi) Other discipline specific competencies		
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 project, independent research project.	Laboratory report, examination, project report.
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 practical, design task, independent research.	As above.
[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?
(i) Oral communication		
Present technical and business information orally, in an appropriate form for a given audience. (C17, M17)	Tutorial, group project, independent research, project supervision.	Oral presentation, portfolio.

ii) Written communication

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(ii) Written communication		
Communicate business and technical information in an appropriate written form for a given audience (C17, M17).	Lecture, group project, 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?
(iii) Information technology		
Use standard and specialist engineering IT software confidently to conduct and report on engineering analysis and projects (C12, M12).	Lecture, group project, independent research, project supervision.	Written assignment, laboratory report, essay, project report, group report.

iv) Numeracy

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(iv) Numeracy		
Manipulate and sort data to generate new data sets (C2).	Problem-solving class, research project.	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?
(v) Team working		
Function effectively as an individual, and as a member or leader of a team (C16).	Tutorial, masterclass, project supervision, induction programme, group project.	Learning log/diary, learning portfolio, group report, reflective report.
[MEng only] Function effectively as an individual, and as a member or leader of a team. Evaluate effectiveness of own and team performance (M16).	Major design and research project.	Project report, design review and presentation, group report, reflective report.

vi) Problem solving

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(vi) Problem solving		
Solve problems through the integration of knowledge of mathematics, science, information technology, design, business context and engineering practice (C1, M1).	Project supervision, lecture, tutorial, example sheet, simulation exercise, laboratory-based exercise, computer-based exercise, 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?
(vii) Information handling		
Select and apply scientific evidence-based methods in the solution of problems (C1, M1, C4, M4).	Lecture, tutorial, example sheet, simulation exercise, laboratory-based exercise, computer-based exercise, independent research project, group project.	Project report, oral and poster presentation, group report, problem-based examination, practical demonstration.
Search for information related to design solution, evaluate it and suggest requirements for additional information (C4, M4).	As above.	As above.
Plan and manage the design process, including cost drivers and evaluate outcomes (C15, M15)	As above.	As above.
[MEng only] Work with limited, incomplete, or contradictory information (M2).	As above.	As above.

viii) Skills for lifelong learning

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(viii) Skills for lifelong learning		
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.
For the Year in industry variant only:		
Explain the process for applying for and securing a relevant placement	On placement: Students undertake a minimum of 9 months experience in the workplace.	Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome.
Construct effective applications for placement opportunities	Project supervision, independent research, work placement	Assessed by a Placement Portfolio, comprising of a Reflective Summary, Professional Development Plan, and Updated CV (excluded from word count) to formally assess on a pass or fail basis.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Recognise suitable plans for transitioning into a placement.	Project supervision, independent research, work placement	Formative feedback during a Placement Visit (in person or via Skype) from Placement Provider and Placement Tutor regarding reflection on skills development, areas of strength and weakness and contribution to the workplace.
Apply the theoretical and practical aspects of the material studied at the University and demonstrate the personal and professional skills necessary for your role within the organisation.	On placement: Students undertake a minimum of 9 months experience in the workplace.	Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome.
Compose a Professional Development Plan considering your strengths, development areas and motivations for your next step.	Project supervision, independent research, work placement	Assessed by a Placement Portfolio, comprising of a Reflective Summary, Professional Development Plan, and Updated CV (excluded from word count) to formally assess on a pass or fail basis.
Modify your CV to include the skills and experience you have gained through your significant experience gained in the past 12 months.	Project supervision, independent research, work placement	Formative feedback during a Placement Visit (in person or via Teams) from Placement Provider and Placement Tutor regarding reflection on skills development, areas of strength and weakness and contribution to the workplace.

10. Progression points

This programme 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.

The following additional progression requirements for this programme have been approved:

- *For Foundation Year Variant:* Reference should be made to the Foundation Year Programme Specification.
- Major individual or group projects modules and/or those covering AHEP4 learning outcomes that are not assessed in other modules are designated as being required to be passed at Honours level and cannot be treated as compensated fails for progression.
- No failed credits (i.e. those for which assessment opportunities have been exhausted) may be carried from 1st year (level 4) to 2nd year (level 5), or from 2nd year (level 5) to 3rd year (level 6) because this would prevent students from being eligible for the award of an accredited degree at the end of their 3rd or 4th year.
- For MEng students, in addition to the standard regulations governing undergraduate programmes, for progression from 2nd year to 3rd year a credit weighted average mark of 55% or more is required. Failure to progress will result in a change in programme from MEng to the equivalent BEng programme. Third year BEng students with a 2nd year credit-weighted average below 55% will not be permitted to transfer to an MEng programme during their 3rd year, others may be permitted to do this.
- For MEng students, in addition to the standard regulations governing undergraduate programmes, for progression from 3rd year to 4th year, a credit weighted average of 55% or more is required and EG3005 must be passed at Honours level. Candidates who do not meet these criteria will be considered for the award of a BEng or non-accredited

BSc degree in their discipline, after one further resit attempt for any failed modules if necessary.

The following additional progression requirements apply for the with Industry version of the programme:

A Placement Student will revert back to the degree without Year in Industry if:

1. They fail to secure a year in industry role.
2. They fail to pass the assessment related to the year in industry.
3. The year in industry ends early due to the behaviour of the Placement Student not being in accordance with the University's Regulations for Students, Student Responsibilities. The Placement Student will need to suspend for the remainder of the academic year. To prevent such an incident from happening, processes are in place to identify any possible issues or concerns early in the year in industry role. This includes a start check, regular communications, visits to the workplace (physical and/or virtual) and evaluation. Communication and contact between the Placement Student, Placement Provider and University provides support should issues arise.
4. They discontinue their Year in Industry. A student can return to their campus-based studies no later than the end of teaching week 2 at the start of the academic year should they decide to discontinue their Year in Industry they should complete a Course Transfer From. If a Placement Student decides to discontinue their Year in Industry after this point they will need to suspend their studies for the remainder of the academic year.

Nine months is the minimum time required for a year in industry to be formally recognised. If the year in industry is terminated earlier than 9 months as a result of event outside of the Placement Students control (for example redundancy, or company liquidation), the following process will be adopted:

1. If the Placement Student has completed 1 – 6 months, they will be supported to search for another placement to take them up to the 9 months required for the year in industry to be formally recognised. If the Placement Student does not find a placement to meet this criteria they will be required to suspend and transferred onto the degree without Year in Industry.
2. If the Placement Student has completed 7-8 months, they will be supported to search for another placement to take them up to the 9 months required for the year in industry to be formally recognised. If the Placement Student cannot source an additional placement to take them to 9 months, assessments related to the year in industry will be set for the student to make it possible for the individual learning objectives for the year in industry to be met. This will allow the Year in Industry to be recognised in the degree certificate.

A Placement Student will not be permitted to undertake a placement which runs across two academic years.

In cases where a student has failed to meet a requirement to progress he or she will be required to withdraw from the course.

a) Course transfers

Students who do not achieve the standard required for MEng, including those who have an average 2nd year mark of less than 55%, will be transferred to the BEng degree course

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 additional award requirements for this programme have been approved as conditions of professional body accreditation:

- Major individual or group project modules and/or those covering AHEP4 learning outcomes that are not assessed in other modules are designated as being required to be passed at Honours level and cannot be treated as compensated fails for the purpose of award. For BEng this is EG3005. For MEng these are EG4007 and EG4009.
- EG4007 and EG4009 have no resit option so must be passed at the first attempt because to provide one is impractical given the combination of practical and team-working.
- To qualify for an accredited degree award, the mark for each module assessment **must not be lower than 10% below the standard module pass mark** (40% for levels 4-6, 50% for level 7).

  All assessments will therefore have a qualifying mark of 30.00% (levels 4, 5 and 6) or 40.00% (level 7) with the exception of those assessments listed below. Students who fail to meet this threshold in any of the assessment components may re-sit the component, provided re-sit opportunities are available for the module, in accordance with SR5.

  The following assessment components are exempt from this requirement:

  EG3125 Coursework
  EG3313 Progress Tests
  EG3422 VLE Tests
  EG4227 Coursework Project 1
  EG4422 Online Continuous Assessment

  Students who fail to achieve this requirement, but otherwise meet the University progression requirements, will be transferred to the non-accredited version of the BEng degree (if they fail to meet the requirements on modules in levels 4-6) or MEng degree (if they fail to meet the requirements on modules in level 7.)

- For accreditation purposes, the Engineering Council requires that finalists on accredited BEng and MEng programmes:
  1. Must have no more than 30 credits with marks in the range 35.00 -39.99 at levels 4-6 or in the range 40.00-49.99 at level 7.
  2. Must have no failed modules with marks below 35.00 (levels 4-6) or 40.00 (level 7).

  Finalists who do not meet both these criteria will be permitted one further attempt to resit any failed modules for which they have remaining attempts. If after resit they do not achieve the requirements above but do meet the University's criteria for the award of a bachelor's degree, they will be awarded the non-accredited degree of BSc in Aerospace Engineering.

12. Special features

Students receive a broad education in engineering which also provides the flexibility for more specialist focus later in the degree. Opportunities are available to undertake industrial placement with a sponsoring company (with Industry). Students following "with a Year Abroad" programmes study for year out of the UK. The year abroad does not replace any of the Leicester course material, rather it provides an opportunity for the students to broaden their experience.

The four undergraduate degree streams of Aerospace, Mechanical, Electronic & Electrical and General are highly integrated. Students may switch between Aerospace, Mechanical and General programmes during their first year. This derives from the General Engineering ethos of the

Department, ensures all engineering students benefit from a solid foundation in the fundamentals of all engineering disciplines. This feature is used to maximise opportunities for interdisciplinary working and integrated projects teams that are so important to modern professional engineering careers.

For students on the with Industry programme, it is the student's responsibility to secure a year in industry role. When a Placement Student starts a year in industry, they will be required to complete health and safety documents and confirm they have completed a formal induction process no later than the 2nd week of placement.

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 the Curriculum Transformation process, resulting in the current programmes structures being applied to students entering from academic year 2024/2025.

05.06.2026 NOTE As of 1 August 2024 the new intakes to the programmes in General, Aerospace and Mechanical Engineering no longer hold accreditation from the Institute of Measurement and Control (InstMC). Degrees retain their accreditation from other appropriate Engineering bodies.

All of the current programmes are accredited by the appropriate professional engineering institutions (PEIs) and the MEng programmes offer direct route to Chartered Engineer status (CEng) (further learning following graduation is required to obtain CEng with a BEng degree).

Currently, accreditation of programmes within the School of Engineering are maintained through the Institution of Mechanical Engineers (IMechE), and the Institution of Engineering and Technology (IET). The School keeps the professional engineering institutions whom we seek accreditation from under review and the 5 yearly accreditation visits are key events in continuously improving the programmes and evolving them to meet the needs of future graduates and employers.

Revisions to the programme and module ILOs, and the introduction of new Engineering Council criteria for awarding accredited degrees were implemented in the latest revision of these programmes in response to the accreditation visit in May 2024.

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
https://uniofleicester.sharepoint.com/sites/university/exam-papers/SitePages/Exam-Papers.aspx
[log-in required]

UNIVERSITY OF LEICESTER

Programme Specification (Undergraduate) FOR ENTRY YEAR: 2024/25

Date created: 31/03/2021 **Last amended:** 05/06/2026 **Version no.** 6

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
2025/26	EG2004 Engineering Experimentation and Analysis	Core module removed
2025/26	EG2006 Integrated Engineering Design	Changed from 30 credits to 15 credits
2025/26	EG2008 Engineering Management and Business Simulation	New core module
2025/26	EG2112 Dynamics and Thermofluids	Core module removed
2025/26	EG2132 Fluid Dynamics and Aerodynamics	New core module
2025/26	EG2113 Dynamics and Vibrations	New core module
2025/26	EG2422 Aerodynamics and Aircraft Systems	Core module removed
2025/26	EG2xxx Aircraft Systems and Propulsion	New core module
2026/27	EG3008 Engineering Management	Core module removed
2026/27	EG3421 Flight Dynamics and Control	Was optional, now core
2027/28	EG4009 Leadership and Project Management	Changed from 30 credits to 15 credits

BEng/MEng AEROSPACE ENGINEERING

Level 4/Year 1 2024/25

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
Year long	EG1007*	SUSTAINABLE ENGINEERING DESIGN	15 credits
Sem 1	EG1016*	ENGINEERING MATHEMATICS WITH PROGRAMMING 1	15 credits
Sem 2	EG1026*	ENGINEERING MATHEMATICS WITH PROGRAMMING 2	15 credits
Sem 1	EG1031*	SOLID MECHANICS	15 credits
Sem 2	EG1041*	FLUID MECHANICS	15 credits
Sem 2	EG1102*	THERMODYNAMICS AND HEAT TRANSFER	15 credits
Sem 1	EG1203*	PRINCIPLES OF ELECTRICAL ENGINEERING	15 credits
Year long	EG1122*	DIGITAL ELECTRONICS AND COMMUNICATIONS	15 credits

Notes

Modules marked with an asterisk are common to all engineering UG programmes.

Level 5/Year 2 2025/26

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
Yearlong	EG2006*	INTEGRATED ENGINEERING DESIGN	15 credits
Semester 1	EG2008*	ENGINEERING MANAGEMENT AND BUSINESS SIMULATION	15 credits
Year long	EG2302*	SYSTEM DYNAMICS AND CONTROL	15 credits
Sem 1	EG2111	MATERIALS AND STRUCTURES	15 credits
Sem 1	EG2132	FLUID DYNAMICS AND AERODYNAMICS	15 credits
Sem 2	EG2113	DYNAMICS AND VIBRATIONS	15 credits
Sem 2	EG2421	AIRCRAFT PERFORMANCE AND NAVIGATION	15 credits
Sem 2	EG2XXX	AIRCRAFT SYSTEMS AND PROPULSION	15 credits

Notes

Modules marked with an asterisk are common to all engineering UG programmes.

Level 6/Year 3 2026/27

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	30 credits	45 credits	15 credits
Optional	n/a	n/a	30 credits

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Year long	EG3005	INDIVIDUAL PROJECT	30 credits
Sem 1	EG3111	FINITE ELEMENT ANALYSIS AND DESIGN	15 credits
Sem 1	EG3313	STATE VARIABLE CONTROL	15 credits
Sem 1	EG3411	COMPRESSIBLE AND APPLIED AERODYNAMICS	15 credits
Semester 2	EG3421	FLIGHT DYNAMICS AND CONTROL	15 credits

Option modules

Delivery period	Code	Title	Credits
Semester 2	EG3125	RIGID-BODY AND STRUCTURAL DYNAMICS	15 credits
Semester 2	EG3323	DIGITAL CONTROL AND ACTUATORS	15 credits
Semester 2	EG3213	MACHINE LEARNING FOR ENGINEERS	15 credits
Semester 2	EG3422	AEROSPACE MATERIALS AND STRUCTURES	15 credits

Notes

Choose two optional modules in semester 2.

Level 7/Year 4 2027/28

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	45 credits	15 credits	15 credits
Optional	n/a	15 credits	30 credits

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Year long	EG4007	GROUP PROJECT	30 credits
Year long	EG4009	LEADERSHIP AND PROJECT MANAGEMENT	15 credits
Sem 1	EG4413	SPACECRAFT SYSTEMS ENGINEERING	15 credits
Sem 2	EG4422	ADVANCED GAS TURBINES	15 credits

Option modules

Delivery period	Code	Title	Credits
Semester 1	EG4115	FLUID INSTABILITY, TRANSITION AND TURBULENCE	15 credits
Semester 1	EG4116	ADVANCED SOLID MECHANICS	15 credits
Semester 1	EG4313	ROTORCRAFT MECHANICS AND CONTROL	15 credits
Semester 2	EG4125	COMPUTATIONAL FLUID DYNAMICS	15 credits
Semester 2	EG4126	ADVANCED COMPOSITE MATERIALS	15 credits
Semester 2	EG4323	ATTITUDE AND ORBIT CONTROL SYSTEMS	15 credits
Semester 2	EG4324	SIGNAL PROCESSING	15 credits

Notes
Choose one optional module from semester 1 and two optional module from semester 2.

BEng/MEng degrees WITH INDUSTRY

For BEng students, the year in industry must be taken in the third year of their course. The schedule for this programme is given below.

For MEng students, a single year in industry can be taken either in the third year or the fourth year of their course. The schedule for MEng students taking a year in industry in their third year is given below. The schedule is similar for MEng students taking the year in industry in their fourth year, with the third year and fourth years interchanged.

BSc with Industry degrees may be awarded as an exit award if students have successfully completed the requirements of the with industry and the University's standard requirements for a Bachelor's degree but have not achieved the Engineering Council's award requirements for accredited engineering degrees codified in sections 10 and 11 above.

FIRST YEAR MODULES

As the first year of degree programme.

ADDITIONAL THIRD YEAR MODULES

Year in Industry

ADEG223	On Placement	0

FOURTH YEAR MODULES

As the third year of degree programme.

FIFTH YEAR MODULES (MEng with Industry only)

As the fourth year of degree programme.

BEng/MEng degrees WITH A YEAR ABROAD

FIRST AND SECOND YEAR MODULES

As for the first and second years of BEng Aerospace Engineering/ BEng Electronic and Electrical Engineering/ BEng General Engineering/ BEng Mechanical Engineering respectively.

THIRD YEAR MODULES (Year Abroad)

Students spend the third year taking approved modules at one of the institutions associated with the Department of Engineering. Students will normally be assessed according to the criteria of the host institution, but if it is not practicable to retake failed modules there, they may be allowed to submit a report demonstrating how they have nevertheless achieved the learning outcomes for the year. Marks from the year will not count towards the degree class.

BEng: Students who do not satisfactorily complete the year will be transferred to the standard BEng of their respective degree strand (e.g. BEng Aerospace Engineering, BEng General Engineering etc.).

MEng: Students who do not satisfactorily complete the year will be transferred to the standard MEng of their respective degree strand (e.g. MEng Aerospace Engineering, MEng General Engineering etc.).

FOURTH YEAR MODULES

BEng: As 3rd year of the BEng Aerospace Engineering/ BEng Electronic and Electrical Engineering/ BEng General Engineering/ BEng Mechanical Engineering respectively.

MEng: As 3rd year of the MEng Aerospace Engineering/ MEng Electronic and Electrical Engineering/ MEng General Engineering/ MEng Mechanical Engineering respectively.

FIFTH YEAR MODULES (MEng degrees with a Year Abroad only)

MEng: As 4th year of the MEng Aerospace Engineering/ MEng Electronic and Electrical Engineering/ MEng General Engineering/ MEng Mechanical Engineering respectively.

BSc with Year Abroad degrees may be awarded as an exit award if students have successfully completed the requirements of the Year Abroad and the University's standard requirements for a Bachelor's degree but have not achieved the Engineering Council's award requirements for accredited engineering degrees codified in sections 10 and 11 above.

Appendix 2: Module specifications

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