Programme Specification: Undergraduate

For Academic Year 2026/27

1. Course Summary

Names of programme and award title(s)	MEng (Hons) Chemical Engineering MEng (Hons) Chemical Engineering with International Year MEng (Hons) Chemical Engineering with Work Placement Year
Award type	Single Honours (Masters)
Mode of study	Full-time
Framework of Higher Education Qualification (FHEQ) level of final award	Level 7
Normal length of the programme	4 years, or 5 years with either the International Year or Work Placement Year
Maximum period of registration	The normal length as specified above plus 3 years
Location of study	Keele Campus
Accreditation (if applicable)	See section 12
Regulator	Office for Students (OfS)
Tuition Fees	**UK students:** Fee for 2026/27 is £9,790* **International students:** Fee for 2026/27 is £18,200** The fee for the international year abroad is calculated at 15% of the standard year fee The fee for the work placement year is calculated at 20% of the standard year fee

How this information might change: *Please read the important information at http://www.keele.ac.uk/student-agreement/. This explains how and why we may need to make changes to the information provided in this document and to help you understand how we will communicate with you if this happens.*

** These fees are regulated by Government. We reserve the right to increase fees in subsequent years of study in response to changes in government policy and/or changes to the law. If permitted by such change in policy or law, we may increase your fees by an inflationary amount or such other measure as required by government policy or the law. Please refer to the accompanying Student Terms & Conditions. Further information on fees can be found at http://www.keele.ac.uk/studentfunding/tuitionfees/*

*** These fees are for new students. We reserve the right to increase fees in subsequent years of study by an inflationary amount. Please refer to the accompanying Student Terms & Conditions for full details. Further information on fees can be found at http://www.keele.ac.uk/studentfunding/tuitionfees/*

2. What is an Integrated Master's programme?

Integrated master's awards - which are common in science, mathematics and engineering - are delivered through a programme that combines study at the level of a bachelor's degree with honours with study at master's level. As such, a student graduates with a master's degree after a single four-year programme of study. The Integrated Masters programme described in this document builds upon the three year Single Honours programme by adding a fourth year in which students study modules at an advanced level.

3. Overview of the Programme

Chemical engineering addresses some of the world's most pressing challenges: clean energy, safe water, life-saving medicines, sustainable food systems, and advanced materials for modern technology. Combining science, creativity, and problem-solving, chemical engineers design and optimise the processes that underpin daily life. It is a career where every project can improve lives and shape a sustainable future.

Chemical Engineering follows a systematic course structure utilising four interlinked strands that that provide progressive development of the attributes of an engineering professional.

1. **Engineering Fundamentals** provide the scientific and technical principles needed to interpret and solve complex problems together with the foundational concepts of mechanics, material science, and energy transfer processes.
2. **Engineering Skills** develop hands-on competence through laboratory work, workshops, technical communication, and project management.
3. **Engineering Simulation and Mathematics** enable advanced analysis, modelling, and precise communication of engineering concepts.
4. **Professional Practice** focusses on your career as a professional chemical engineer, helping you to acquire the professional attributes, specialist knowledge and skills that will help you to compete post-graduation.

From the start of your degree, you will build a foundation in mechanics, materials, thermodynamics, electrical systems, mathematics, programming, and simulation tools. Specialist chemical engineering study begins with thermodynamics, reaction kinetics, and mass and energy balances, alongside early exposure to bio-based polymers and nanomaterials. As you progress through your degree you will learn to deal with complex applications, learning about system performance, control, and modelling with AI-assisted tools. In your third year, you will integrate core knowledge to address sustainability and circular economy challenges reflecting some of the unique facilities here at Keele such as HyDEX (a research hydrogen production and storage facility) and SEND (a real-life laboratory for testing and implementing smart and low-carbon energy technologies). You will gain insight into cutting-edge research in areas such as renewable and sustainable technologies and high-value materials, where engineering lies at the heart of enabling energy transition for the future. We will explore process and plant design, and reactor technologies used to produce high-value materials including semiconductors, graphene, engineered biomaterials, and aerospace ceramics. You will develop key skills in leadership, teamwork, communication and research through completion of two major projects, an individual research dissertation and a collaborative industry-led design project.

At Master's level, you will engage with advanced and contemporary topics in chemical engineering, extending your technical expertise while continuing to develop as an independent professional. A key focus is the development of advanced research skills, including the ability to critically evaluate complex problems, synthesise information from multiple sources, and apply appropriate methodologies to generate original solutions. You will strengthen your capacity for critical thinking, reflection, and innovation, as well as your ability to communicate research findings effectively to both specialist and non-specialist audiences.

As part of this, you will undertake a substantial research project, choosing between two pathways: one based at Keele, where you will work with academics on cutting-edge research aligned with current engineering challenges, or one led by industry, where you will gain first-hand experience of addressing real-world problems in collaboration with external partners. Both routes are designed to deepen your technical and professional capabilities, preparing you for leadership roles in industry or for doctoral-level study.

Professional practice is embedded across every level of study, developing teamwork, ethics, communication, and personal growth. You will encounter a range of Professional Challenge Projects, based on an industry-led scenarios, helping you to apply and contextualise your new skills to real-world problems. You will be offered a range of added value experiences such as international year and work placement year.

As a successful graduate, you will be able to pursue professional careers such as Process Engineer (e.g. optimising refinery or pharmaceutical production systems), Environmental Engineer (e.g. designing industrial waste treatment or carbon reduction processes), Energy Systems Engineer (e.g. developing hydrogen fuel or carbon capture plants), Materials Development Engineer (e.g. creating advanced ceramics or semiconductor materials), and Research Engineer (e.g. investigating novel catalysts or sustainable manufacturing methods).

4. Aims of the programme

The broad aims of the programme are to enable you to:

- Gain knowledge and understanding of chemical engineering through both guided study and independent research.
- Develop and evidence a range of key employability and professional skills including critical thinking, communication, evidence-based problem solving, and data analysis.
- Undertake a range of individual and group research-led projects that are informed by industry and societal needs.
- Gain relevant experience and insight into a range of different career pathways associated with chemical engineering.
- Develop advanced research skills, including the ability to design and execute independent investigations, critically evaluate complex evidence, and apply appropriate methodologies to address chemical engineering challenges.
- Engage with cutting-edge developments in chemical engineering through research-informed teaching and substantial project work, developing the capacity for innovation and creativity.
- Demonstrate mastery of critical thinking and problem-solving in unfamiliar, complex, or multidisciplinary contexts, drawing on current research and practice.

5. What you will learn

The intended learning outcomes of the programme (what students should know, understand and be able to do at the end of the programme), can be described under the following headings:

- Subject knowledge and understanding
- Subject specific skills
- Key or transferable skills (including employability skills)

Subject knowledge and understanding

Successful students will be able to:

- The chemical engineering discipline, its practical applications, and underpinning scientific and mathematical principles, including relevant legal frameworks and standards.
- Mathematical and computational models and apply that to design, analyse, and solve chemical engineering problems, selecting suitable methods and recognising uncertainty and limitations in analysis.
- How to evaluate materials and components for chemical engineering applications, considering properties, performance, and context-specific requirements.
- How to apply principles and methods of chemical engineering design within general and specialist contexts, integrating ethical, social, sustainability, systems thinking and quality system considerations.
- How to apply core chemical engineering principles thermodynamics, transport phenomena, reaction engineering, separation processes, and process safety to model and evaluate open-ended and complex process systems under uncertainty.
- Process systems engineering, including process control, plant operations, optimisation, and environmental impact assessment.

Subject specific skills

Successful students will be able to:

- Identify and analyse complex chemical engineering problems, developing creative and systematic solutions that are safe, secure, sustainable, and compliant with statutory requirements.
- Manage the design process from conception to delivery, producing products, services, or systems that meet specifications, using sketches, diagrams, and appropriate documentation.
- Use practical tools, laboratory instrumentation, and IT resources effectively for design, analysis, prototyping, and communication, recognising limitations and uncertainties.
- Work safely and ethically in relevant chemical engineering environments, applying quality system principles, legal requirements, and professional practices.
- Undertake major chemical engineering design projects integrating technical principles, safety, sustainability, lifecycle thinking, and regulatory compliance.
- Apply advanced process engineering and simulation tools (e.g., process modelling, digital twins, computational fluid dynamics, AI/data analysis) to optimise processes and support decision-making.
- Critically assess emerging research, technologies, and methodologies at the forefront of their specialist discipline.
- Integrate advanced interdisciplinary knowledge and systems thinking to propose innovative, sustainable solutions that comply with legal and professional standards.
- Critically evaluate and optimise chemical engineering designs, prototypes, and systems considering lifecycle, environmental, socio-economic, and regulatory impacts.

Key or transferable skills (including employability skills)

Successful students will be able to:

- Source, evaluate, and synthesise information from diverse sources for application in chemical engineering activities.
- Apply reasoning and inclusive practices to make evidence-based, balanced decisions in familiar and unfamiliar contexts.
- Communicate effectively to a range of audiences using appropriate media, including visual, verbal, and written formats.
- Manage personal and professional development through reflective practice, independent learning, and goal setting.
- Lead multi-disciplinary and inter-professional project teams, applying project management tools, and managing resources, quality, and risk in complex contexts.
- Demonstrate cultural awareness and the ability to operate and lead effectively in global, multi-disciplinary, and inter-professional contexts.
- Engage with professional, ethical, legal, and global responsibilities, influencing practice, quality standards, and policy in chemical engineering.

Keele Graduate attributes

The Keele Graduate Attributes are the qualities (skills, values and mindsets) which you will have the opportunity to develop during your time at Keele through both the formal curriculum and also through co- and extra-curricular activities (e.g., work experience, and engagement with the wider University community such as acting as ambassadors, volunteering, peer mentoring, student representation, membership and leadership of clubs and societies). Our Graduate Attributes consist of four themes: **academic expertise, professional skills, personal effectiveness, and social, environmental and ethical responsibility**. You will have opportunities to engage actively with the range of attributes throughout your time at Keele: through your academic studies, through self-assessing your own strengths, weaknesses, and development needs, and by setting personal development goals. You will have opportunities to discuss your progress in developing graduate attributes with, for example, Academic Mentors, to prepare for your future career and lives beyond Keele.

6. How is the programme taught?

Diversity, flexibility, and inclusivity are at the heart of our education strategy. Learning and teaching methods used on the programme vary according to the subject matter and level of the module. They include the following:

- **Laboratory practicals:** Take place in one of our state-of-the-art science labs. These give you first-hand experience in a range of scientific techniques and have been designed to ensure you develop both independent and team-based skills.
- **Digital learning resources:** Digital learning resources are designed to support in person teaching, ensuring that all core content is recorded. Our aim is to offer a more inclusive learning environment that gives you more flexibility to decide how, when, and where to study.
- **Live, campus-based interactive lectures:** Delivered by experts in the field, including external guest speakers. Interactive lectures focus on active learning and aim to provide opportunities for you to discuss key content and consolidate your learning.
- **Live, campus-based tutorials and workshops:** Often designed to support those areas that we know can be difficult, such as statistics. Tutorials and workshops are often delivered in small groups designed to promote social learning, develop a sense of community, and to give you an opportunity to apply your knowledge and deepen your understanding of core issues through discussion with other students and your tutors.
- **Live, online drop-in sessions:** Provide opportunities for you to raise questions in a safe and flexible environment.

Apart from these formal activities, we operate an open-door policy so you can ask for a meeting with any of our tutors across the year to discuss particular areas of difficulty or concern. You will also have access to specialist advice and support through our Academic Mentors, Disability Inclusion Tutors, Student Experience and Support Officers, and a range of central services including Counselling and Mental Health, Careers and Employability, and Student Finance

7. Teaching Staff

University life is not just about the content of your degree. It is also an opportunity to network and to meet people working in fields that excite you. Our staff include world-leading researchers, practitioners, and experts in learning and teaching that choose to specialise in pedagogic research. This rich diversity of staff expertise

ensures that our programmes remain current and delivered to the very highest educational standards. You can find out more about our staff using the following link: (https://www.keele.ac.uk/scps/)

The University will attempt to minimise changes to our core teaching teams, however, delivery of the programme depends on having a sufficient number of staff with the relevant expertise to ensure that the programme is taught to the appropriate academic standard.

Staff turnover, for example where key members of staff leave, fall ill or go on research leave, may result in changes to the programme's content. The University will endeavour to ensure that any impact on students is limited if such changes occur.

8. What is the structure of the programme?

The academic year runs from September to June and is divided into two semesters. Each semester will generally have 12 weeks of teaching, and an additional 3 weeks of final assessments. Details of each semester can be found using the following link: https://www.keele.ac.uk/students/academiclife/keydates/.

Our programme is organised into modules. Each module is usually a self- contained unit of study, and each is usually assessed separately with the award of credits on the basis of 1 credit = 10 hours of student effort. An outline of the structure of the programme is provided in the tables below.

A summary of the credit requirements per year is as follows.

Year	Compulsory	Optional	
		Min	Max
Level 4	120	0	0
Level 5	120	0	0
Level 6	120	0	0
Level 7	120	0	0

Module Lists

Level 4

Compulsory modules	Module Code	Credits	Period
Fundamental Concepts in Engineering Science: Static Systems I	EGN-10001	30	Semester 1
Fundamental Mathematics for Engineers	EGN-10005	15	Semester 1
Professional Engineering Practice 1 in Chemical Engineering	EGN-10009	30	Semester 1-2
Fundamental Concepts in Engineering Science: Dynamic Systems I	EGN-10003	30	Semester 2
Coding and Computational Design for Engineers	EGN-10007	15	Semester 2-3

Level 5

Compulsory modules	Module Code	Credits	Period
Extended Concepts in Engineering Science: Static Systems II	EGN-20001	30	Semester 1
Further Mathematics for Engineers	EGN-20005	15	Semester 1
Extended Professional Practice in Chemical Engineering	EGN-20009	30	Semester 1-2
Extended Concepts in Engineering Science: Dynamic Systems II	EGN-20003	30	Semester 2
Systems Engineering and Modelling	EGN-20007	15	Semester 2

Level 6

Compulsory modules	Module Code	Credits	Period
Devising Sustainable Engineering Processes and Products	EGN-30001	30	Semester 1
Individual Research Project	EGN-30003	30	Semester 1-2
Integrated Design Project	EGN-30005	15	Semester 1-2
- Professional Engineering Practice 3 in Chemical Engineering	EGN-30015	30	Semester 1-2
Advanced Engineering of High-Value Materials for the Clean Energy Transition	EGN-30007	15	Semester 2

Level 6 Module Rules

Due to professional body requirements, EGN-30003 and EGN-30005 cannot be condoned. Students unable to reach the 40% pass threshold for this module may be able to repeat the year either in full or on a modular basis.

Level 7

Compulsory modules	Module Code	Credits	Period
Professional Portfolio	EGN-40001	30	Semester 1-2
Contemporary Topics in Engineering	EGN-40005	30	Semester 1-2
Capstone Project in Chemical Engineering	EGN-40007	60	Semester 1-2

Learning Outcomes

The table below sets out what students learn in the programme and the modules in which that learning takes place. Details of how learning outcomes are assessed through these modules can be found in module specifications.

Subject Knowledge and Understanding	
Learning Outcome	**Module in which this is delivered**
Their chemical engineering discipline, its practical applications, and underpinning scientific and mathematical principles, including relevant legal frameworks and standards.	All modules
Mathematical and computational models and apply that to design, analyse, and solve chemical engineering problems, selecting suitable methods and recognising uncertainty and limitations in analysis.	Fundamental Mathematics for Engineers - EGN-10005 Coding and Computational Design for Engineers - EGN-10007 Further Mathematics for Engineers - EGN-20005 Systems Engineering and Modelling - EGN-20007
How to evaluate materials and components for chemical engineering applications, considering properties, performance, and context-specific requirements.	Fundamental Concepts in Engineering Science: Static Systems I - EGN-10001 Fundamental Mathematics for Engineers - EGN-10005 Extended Concepts in Engineering Science: Static Systems II - EGN-20001 Extended Concepts in Engineering Science: Dynamic Systems II - EGN-20003 Further Mathematics for Engineers - EGN-20005 Devising Sustainable Engineering Processes and Products - EGN-30001
How to apply principles and methods of chemical engineering design within general and specialist contexts, integrating ethical, social, sustainability, systems thinking and quality system considerations.	Professional Engineering Practice 1 in Chemical Engineering - EGN-10009 Extended Professional Practice in Chemical Engineering - EGN-20009 Individual Research Project - EGN-30003 Integrated Design Project - EGN-30005 - Professional Engineering Practice 3 in Chemical Engineering - EGN-30015
How to apply core chemical engineering principles thermodynamics, transport phenomena, reaction engineering, separation processes, and process safety to model and evaluate open-ended and complex process systems under uncertainty.	Fundamental Concepts in Engineering Science: Static Systems I - EGN-10001 Fundamental Concepts in Engineering Science: Dynamic Systems I - EGN-10003 Fundamental Mathematics for Engineers - EGN-10005 Extended Concepts in Engineering Science: Static Systems II - EGN-20001 Extended Concepts in Engineering Science: Dynamic Systems II - EGN-20003 Further Mathematics for Engineers - EGN-20005 Systems Engineering and Modelling - EGN-20007 Devising Sustainable Engineering Processes and Products - EGN-30001 Advanced Engineering of High-Value Materials for the Clean Energy Transition - EGN-30007
Process systems engineering, including process control, plant operations, optimisation, and environmental impact assessment.	Professional Engineering Practice 1 in Chemical Engineering - EGN-10009 Systems Engineering and Modelling - EGN-20007 Devising Sustainable Engineering Processes and Products - EGN-30001

Subject Specific Skills	
Learning Outcome	**Module in which this is delivered**
Identify and analyse complex chemical engineering problems, developing creative and systematic solutions that are safe, secure, sustainable, and compliant with statutory requirements.	Fundamental Concepts in Engineering Science: Static Systems I - EGN-10001 Fundamental Mathematics for Engineers - EGN-10005 Extended Concepts in Engineering Science: Static Systems II - EGN-20001 Extended Concepts in Engineering Science: Dynamic Systems II - EGN-20003 Further Mathematics for Engineers - EGN-20005 Devising Sustainable Engineering Processes and Products - EGN-30001
Manage the design process from conception to delivery, producing products, services, or systems that meet specifications, using sketches, diagrams, and appropriate documentation.	Coding and Computational Design for Engineers - EGN-10007 Professional Engineering Practice 1 in Chemical Engineering - EGN-10009 Extended Professional Practice in Chemical Engineering - EGN-20009 - Professional Engineering Practice 3 in Chemical Engineering - EGN-30015
Use practical tools, laboratory instrumentation, and IT resources effectively for design, analysis, prototyping, and communication, recognising limitations and uncertainties.	All modules
Work safely and ethically in relevant chemical engineering environments, applying quality system principles, legal requirements, and professional practices	All modules
Undertake major chemical engineering design projects integrating technical principles, safety, sustainability, lifecycle thinking, and regulatory compliance.	Professional Engineering Practice 1 in Chemical Engineering - EGN-10009 Extended Professional Practice in Chemical Engineering - EGN-20009 Individual Research Project - EGN-30003 Integrated Design Project - EGN-30005 - Professional Engineering Practice 3 in Chemical Engineering - EGN-30015
Apply advanced process engineering and simulation tools (e.g., process modelling, digital twins, CFD, AI/data analysis) to optimise processes and support decision-making.	Coding and Computational Design for Engineers - EGN-10007 Professional Engineering Practice 1 in Chemical Engineering - EGN-10009 Systems Engineering and Modelling - EGN-20007 Extended Professional Practice in Chemical Engineering - EGN-20009 Individual Research Project - EGN-30003 Integrated Design Project - EGN-30005 - Professional Engineering Practice 3 in Chemical Engineering - EGN-30015
Critically assess emerging research, technologies, and methodologies at the forefront of their specialist discipline.	Contemporary Topics in Engineering - EGN-40005 Capstone Project in Chemical Engineering - EGN-40007
Integrate advanced interdisciplinary knowledge and systems thinking to propose innovative, sustainable solutions that comply with legal and professional standards.	Contemporary Topics in Engineering - EGN-40005 Capstone Project in Chemical Engineering - EGN-40007
Critically evaluate and optimise chemical engineering designs, prototypes, and systems considering lifecycle, environmental, socio-economic, and regulatory impacts.	Contemporary Topics in Engineering - EGN-40005 Capstone Project in Chemical Engineering - EGN-40007

Key or Transferable Skills (graduate attributes)	
Learning Outcome	**Module in which this is delivered**
Source, evaluate, and synthesise information from diverse sources for application in chemical engineering activities.	All modules
Apply reasoning and inclusive practices to make evidence-based, balanced decisions in familiar and unfamiliar contexts.	Coding and Computational Design for Engineers - EGN-10007 Professional Engineering Practice 1 in Chemical Engineering - EGN-10009 Systems Engineering and Modelling - EGN-20007 Extended Professional Practice in Chemical Engineering - EGN-20009 Individual Research Project - EGN-30003 Integrated Design Project - EGN-30005 - Professional Engineering Practice 3 in Chemical Engineering - EGN-30015
Communicate effectively to a range of audiences using appropriate media, including visual, verbal, and written formats.	All modules
Manage personal and professional development through reflective practice, independent learning, and goal setting.	Coding and Computational Design for Engineers - EGN-10007 Professional Engineering Practice 1 in Chemical Engineering - EGN-10009 Systems Engineering and Modelling - EGN-20007 Extended Professional Practice in Chemical Engineering - EGN-20009 Individual Research Project - EGN-30003 Integrated Design Project - EGN-30005 - Professional Engineering Practice 3 in Chemical Engineering - EGN-30015
Lead multi-disciplinary and inter-professional project teams, applying project management tools, and managing resources, quality, and risk in complex contexts.	Contemporary Topics in Engineering - EGN-40005
Demonstrate cultural awareness and the ability to operate and lead effectively in global, multi-disciplinary, and inter-professional contexts.	Professional Portfolio - EGN-40001
Engage with professional, ethical, legal, and global responsibilities, influencing practice, quality standards, and policy in chemical engineering.	Professional Portfolio - EGN-40001 Capstone Project in Chemical Engineering - EGN-40007

9. Final and intermediate awards

Credits required for each level of academic award are as follows:

MEng (Hons) Chemical Engineering	480 credits	You will require at least 120 credits at levels 4, 5, 6 and 7 You must accumulate at least 360 credits in your main subject (out of 480 credits overall) to graduate with a named single honours degree in this subject.
BEng (Hons) Chemical Engineering	360 credits	You will require at least 120 credits at levels 4, 5 and 6 You must accumulate a minimum of 270 credits in your main subject (out of 360 credits overall), with at least 90 credits in each of the three years of study, to graduate with a named single honours degree in this subject.
Diploma in Higher Education	240 credits	You will require at least 120 credits at level 4 or higher and at least 120 credits at level 5 or higher
Certificate in Higher Education	120 credits	You will require at least 120 credits at level 4 or higher

International Year option: *Chemical Engineering* students who successfully complete an international year in addition to the above have the following suffix added to their degree title: *with International Year*. Students who do not complete, or fail the international year, will be transferred to the four-year version of the programme.

Work Placement Year option: *Chemical Engineering* students who undertake an industrial placement and successfully complete NAT-30010 *Professional Placement Year* have the following suffix added to their degree title: *with Work Placement Year*. Students who do not complete, or fail the work placement year, will be transferred to the four-year version of the programme.

10. How is the Programme Assessed?

The wide variety of assessment methods used on this programme at Keele reflects the broad range of knowledge and skills that are developed as you progress through the degree programme. Teaching staff pay particular attention to specifying clear assessment criteria and providing timely, regular and constructive feedback that helps to clarify things you did not understand and helps you to improve your performance.

Our assessment strategy will help you to develop and evidence your ability to:

- **Provide evidence-based solutions to current scientific problems**. This is assessed through a range of portfolios and literature reviews.
- **Present scientific findings.** These are lab reports or experimental projects that test your ability to pose scientific hypotheses, design experiments, understand methodologies, present findings, analyse data and situate your work in the current literature. Other assessments will also develop your skills in accessing, manipulating and presenting the outcomes of computational investigations.
- **Communicate effectively with a range of audiences**. These can include scientific posters, public information documents, or oral presentations, as well as more standard laboratory reports, problem sheets and literature reviews.
- **Work professionally.** Your third and fourth year, independent research project will give you an opportunity to demonstrate a range of professional skills such as leadership, innovation, time keeping, communication and the ability to work safely and ethically.
- **Work effectively in a team**. Most often this is assessed through group presentations but can also include a variety of team-based projects.
- **Solve problems in a time-limited fashion**. Often in the work environment we are asked to solve problems in a relatively short amount of time. Invigilated examinations will help you to evidence these skills.

Marks are awarded for summative assessments designed to assess your achievement of learning outcomes. You will also be assessed formatively to enable you to monitor your own progress and to assist staff in identifying and addressing any specific learning needs. Feedback, including guidance on how you can improve the quality of your work, is also provided on all summative assessments within three working weeks of submission, unless there are compelling circumstances that make this impossible, and more informally in the course of tutorial and seminar discussions.

11. Contact Time and Expected Workload

This contact time measure is intended to provide you with an indication of the type of activity you are likely to undertake during this programme. The data is compiled based on module choices and learning patterns of students on similar programmes in previous years. Every effort is made to ensure this data is a realistic representation of what you are likely to experience, but changes to programmes, teaching methods and assessment methods mean this data is representative and not specific.

The figures below are an example of activities that a student may expect on your chosen course by year stage of study. Contact time includes scheduled activities such as: lecture, seminar, tutorial, project supervision, demonstration, practical classes and labs, supervised time in labs/workshop, fieldwork and external visits. The figures are based on 1,200 hours of student effort each year for full-time students.

Activity

	Scheduled learning and teaching activities	**Guided independent Study**	**Placements**
Year 1 (Level 4)	24.8%	75.3%	0%
Year 2 (Level 5)	28.2%	71.8%	0%
Year 3 (Level 6)	24.3%	75.7%	0%
Year 4 (Level 7)	17.8%	82.2%	0%

12. Accreditation

This programme is seeking accreditation with the Institution of Chemical Engineers (ICHEME).

13. University Regulations

The University Regulations form the framework for learning, teaching and assessment and other aspects of the student experience. Further information about the University Regulations can be found at: http://www.keele.ac.uk/student-agreement/

If this programme has any exemptions, variations or additions to the University Regulations these will be detailed in an Annex at the end of this document titled 'Programme-specific regulations'.

14. What are the typical admission requirements for the Programme?

See the relevant course page on the website for the admission requirements relevant to this programme: https://www.keele.ac.uk/study/

English for Academic Purposes

Please note: All new international students entering the university will provide a sample of Academic English during their registration Using this sample, the Language Centre may allocate you to an English language module which will become compulsory. This will replace any GCP modules. *NB:* students can take an EAP module only with the approval of the English Language Programme Director and are not able to take any other Language modules in the same academic year.

English Language Modules at Level 4:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2)
- Science - ENL-90013 Academic English for Science Students
- General - ENL-90006 English for Academic Purposes 2; ENL-90001 English for Academic Purposes 3; ENL-90002 English for Academic Purposes 4

English Language Modules at Level 5:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2)
- Science - ENL-90013 Academic English for Science Students

- General - ENL-90006 English for Academic Purposes 2; ENL-90001 English for Academic Purposes 3; ENL-90002 English for Academic Purposes 4

English Language Modules at Level 6:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2); ENL-90005 Advanced Business English Communication
- Science - ENL-90013 Academic English for Science Students
- General - ENL-90006 English for Academic Purposes 2; ENL-90001 English for Academic Purposes 3; ENL-90002 English for Academic Purposes 4

Recognition of Prior Learning (RPL) is considered on a case-by-case basis and those interested should contact the Programme Director. The University's guidelines on this can be found here: https://www.keele.ac.uk/qa/programmesandmodules/recognitionofpriorlearning/

15. How are students supported on the programme?

We operate an open-door policy. This means that you can contact any of our staff via email to request a meeting or discus any problem that you may be experiencing. You can also contact any of the following people for additional advice or support:

- Programme Director or Director of Education for programme-, discipline- or School-related issues
- Module Lead for module-related issues
- Demonstrators for help during labs
- Academic Mentors for academic help and guidance
- Student Experience and Support Officers for more personal or pastoral help
- Early Resolution Officer to help advocate for you, for example, if you would like to raise a complaint
- Student Voice are a group of students from your programme that can advocate for you to the school

Student Services also offer a comprehensive range of specialist services that help you at any time from enrolment to graduation. The following link will provide more information: https://www.keele.ac.uk/students/studentservices/

16. Learning Resources

Workshops and tutorials are delivered in modern teaching rooms across the University, including up-to-date PC suites for data analysis and computational workshops. Practical sessions are held in dedicated teaching laboratories which provide modern and well-equipped facilities. Learning resources available to you on the programme include:

- An extensive collection of books and journals held in the University Library on campus.
- Access to a comprehensive range of ebooks, journals and published papers all available online.
- The Keele Learning Environment (KLE) which provides easy access to a wide range of learning resources including lecture materials, detailed assessment briefs, past examination papers, online quizzes, videos or screen casts, and other guidance/supporting resources.

17. Other Learning Opportunities

A summary of the International Year, which is a potential option for students after completion of year 2 (Level 5), is provided in Annex A.

Work Placement Year

A summary of the international year, which is a potential option for students after completion of Year 1 (Level 4) or semester 1 of Year 2 (Level 5), is provided in Annex B.

18. Additional Costs

As to be expected there will be additional costs for inter-library loans and potential overdue library fines, print and graduation, and for any replacement laboratory coats, safety glasses and lab books beyond what is initially provided to you.

If you elect to take a placement between levels 5 and 6 then you will have to bear the costs of travelling to and from your placement provider, and if necessary, accommodation, food and personal costs. Depending on the placement provider additional costs may include parking permits, travel and transport, suitable clothing, DBS checks, and compulsory health checks.

A small stipend may be available from the placement provider for work placements, but this will need to be explored on a placement-by-placement basis as some organisations, such as charities, may not have any extra money available. Students should budget with the assumption that their placement will be unpaid.

International students who require a Tier 4 visa should check with the Immigration Compliance team prior to commencing any type of paid placement to ensure that they are not contravening their visa requirements.

19. Quality management and enhancement

The quality and standards of learning in this programme are subject to a continuous process of monitoring, review and enhancement.

- The School Education Committee is responsible for reviewing and monitoring quality management and enhancement procedures and activities across the School.
- Individual modules and the programme as a whole are reviewed and enhanced every year in the annual programme review which takes place at the end of the academic year.
- The programmes are run in accordance with the University's Quality Assurance procedures and are subject to periodic reviews under the Revalidation process.

Student evaluation of, and feedback on, the quality of learning on every module takes place every year using a variety of different methods:

- The results of student evaluations of all modules are reported to module leaders and reviewed by the Programme Committee as part of annual programme review.
- Findings related to the programme from the annual Postgraduate Taught Experience Survey (PTES), and from regular surveys of the student experience conducted by the University, are subjected to careful analysis and a planned response at programme and School level.
- Feedback received from representatives of students on the programme is considered and acted on at regular meetings of the Student Staff Voice Committee.

The University appoints senior members of academic staff from other universities to act as external examiners on all programmes. They are responsible for:

- Approving examination questions
- Confirming all marks which contribute to a student's degree
- Reviewing and giving advice on the structure and content of the programme and assessment procedures

Information about current external examiner(s) can be found here:
http://www.keele.ac.uk/qa/externalexaminers/currentexternalexaminers/

20. The principles of programme design

The programme described in this document has been drawn up with reference to, and in accordance with the guidance set out in, the following documents:

a. UK Quality Code for Higher Education, Quality Assurance Agency for Higher Education:
http://www.qaa.ac.uk/quality-code

b. QAA Subject Benchmark Statement: Engineering

c. UK Standard for Professional Engineering Competence and Commitment (UK-SPEC)

d. Accreditation of Higher Education Programmes (AHEP4)

e. ICHEME Accreditation of Chemical Engineering Programmes

f. Keele University Regulations and Guidance for Students and Staff: http://www.keele.ac.uk/regulations

21. Annex - International Year

Chemical Engineering with International Year

International Year Programme

Students registered for this Single Honours programme may either be admitted for or apply to transfer during their period of study at Level 5 to the International Year option. Students accepted onto this option will have an extra year of study (the International Year) at an international partner institution after they have completed Year 2 (Level 5) at Keele.

Students who successfully complete both the second year (Level 5) and the International Year will be permitted to progress to Level 6. Students who fail to satisfy the examiners in respect of the International Year will normally revert to the standard programme and progress to Level 6 on that basis. The failure will be recorded on the student's final transcript.

Study at Level 4, Level 5 and Level 6 will be as per the main body of this document. The additional detail contained in this annex will pertain solely to students registered for the International Year option.

International Year Programme Aims

In addition to the programme aims specified in the main body of this document, the international year programme of study aims to provide students with:

1. Personal development as a student and a researcher with an appreciation of the international dimension of their subject
2. Experience of a different culture, academically, professionally and socially

Entry Requirements for the International Year

Students may apply to the 4-year programme during Level 5. Admission to the International Year is subject to successful application, interview and references from appropriate staff.

The criteria to be applied are:

- Academic Performance (an average of 55% across all modules in Semester 1 at Level 5 is normally required. Places on the International Year are then conditional on achieving an average mark of 55% across all Level 5 modules. Students with up to 15 credits of re-assessment who meet the 55% requirement may progress to the International Year. Where no Semester 1 marks have been awarded performance in 1st year marks and ongoing 2nd year assessments are taken into account)
- General Aptitude (to be demonstrated by application for study abroad, interview during the 2nd semester of year 2 (Level 5), and by recommendation of the student's Academic Mentor, 1st and 2nd year tutors and programme director)

Students may not register for both an International Year and a Placement Year.

Student Support

Students will be supported whilst on the International Year via the following methods:

- Phone or Skype conversations with Study Abroad tutor, in line with recommended Academic Mentoring meeting points.
- Support from the University's Global Education Team

Learning Outcomes

In addition to the learning outcomes specified in the main text of the Programme Specification, students who complete a Keele undergraduate programme with International Year will be able to:

1. Describe, discuss and reflect upon the cultural and international differences and similarities of different learning environments
2. Discuss the benefits and challenges of global citizenship and internationalisation
3. Explain how their perspective on their academic discipline has been influenced by locating it within an international setting.
4. Demonstrate the use of critical thinking skills, augmented by creativity and curiosity, in discussing the application of their International Year studies to Chemical Engineering.

In addition, students who complete the International Year will be able to:

These learning outcomes will all be assessed by the submission of a satisfactory individual learning agreement, the successful completion of assessments at the partner institution and the submission of the reflective portfolio element of the international year module.

Regulations

Students registered for the International Year are subject to the programme-specific regulations (if any) and the University regulations. In addition, during the International Year, the following regulations will apply:

Students undertaking the International Year must complete 120 credits, which must comprise *at least 40%* in the student's discipline area.

This may impact on your choice of modules to study, for example you will have to choose certain modules to ensure you have the discipline specific credits required.

Students are barred from studying any module with significant overlap to the Level 6 modules they will study on their return. Significant overlap with Level 5 modules previously studied should also be avoided.

Additional costs for the International Year

Tuition fees for students on the International Year will be charged at 15% of the annual tuition fees for that year of study, as set out in Section 1. The International Year can be included in your Student Finance allocation, to find out more about your personal eligibility see: www.gov.uk

Students will have to bear the costs of travelling to and from their destination university, accommodation, food and personal costs. Depending on the destination they are studying at additional costs may include visas, study permits, residence permits, and compulsory health checks. Students should expect the total costs of studying abroad be greater than if they study in the UK, information is made available from the Global Education Team throughout the process, as costs will vary depending on destination.

Students who meet external eligibility criteria may be eligible for grants as part of this programme. Students studying outside of this programme may be eligible income dependent bursaries at Keele.

Students travel on a comprehensive Keele University insurance plan, for which there are currently no additional charges. Some Governments and/or universities require additional compulsory health coverage plans; costs for this will be advised during the application process.

22. Annex - Work Placement Year

Chemical Engineering with Work Placement Year

Work Placement Year summary

Students registered for this programme may either be admitted for or apply to transfer during their studies to the 'with Work Placement Year' option (NB: for Combined Honours students the rules relating to the work placement year in the subject where the placement is organised are to be followed). Students accepted onto this programme will have an extra year of study (the Work Placement Year) with a relevant placement provider after they have completed Year 2 (Level 5) at Keele.

Students who successfully complete both the second year (Level 5) and the Work Placement Year will be permitted to progress to Level 6. Students who fail to satisfactorily complete the Work Placement Year will normally revert to the 3-year programme and progress to Level 6 on that basis. The failure will be recorded on the student's final transcript.

Study at Level 4, Level 5 and Level 6 will be as per the main body of this document. The additional detail contained in this annex will pertain solely to students registered for the Work Placement Year option.

Work Placement Year Programme Aims

In addition to the programme aims specified in the main body of this document, the Work Placement Year aims to provide students with:

1. Insight and hands-on experience of the workplace within industrial, academic, or public contexts either in the UK or abroad.

Entry Requirements for the Work Placement Year

Admission to the Work Placement Year is subject to successful application, interview and references from appropriate staff. Students have the opportunity to apply directly for the 4-year 'with work placement year' degree programme, or to transfer onto the 4-year programme at the end of Year-1 and in Year-2 at the end of Semester 1. Students who are initially registered for the 4-year degree programme may transfer onto the 3-year degree programme at any point in time, prior to undertaking the year-long work placement. Students who fail to pass the work placement year, and those who fail to meet the minimum requirements of the work placement year module, (* or equivalent, work placement), will be automatically transferred onto the 3-year degree programme.

* We recommend where possible students undertake a placement of between 9 - 12 months on a full-time basis to maximize academic and personal growth. However, the Work Placement Year mandates a minimum of 24 weeks in duration, ideally on a full-time basis, but no less than 21 hours per week. This enables those undertaking an unpaid placement to work on a part-time basis alongside.

The criteria to be applied are:

- A good University attendance record and be in 'good academic standing'.
- Academic Performance (an average of 50% across all modules in Semester 1 at Level 5 is normally required. Places on the Work Placement Year are then conditional on achieving an average mark of 50% across all Level 5 modules. Students with up to 15 credits of re-assessment who meet the 50% requirement may progress to the Work Placement Year. Where no Semester 1 marks have been awarded performance in 1st year marks and ongoing 2nd year assessments are taken into account)
- Students undertaking work placements will be expected to complete a Health and Safety checklist prior to commencing their work experience and will be required to satisfy the Health and Safety regulations of the company or organisation at which they are based.
- *(International students only)* Due to visa requirements, it is not possible for international students who require a Tier 4 Visa to apply for direct entry onto the 4-year with Work Placement Year degree programme. Students wishing to transfer onto this programme should discuss this with student support, the academic tutor for the work placement year, and the Programme Lead. Students should be aware that there are visa implications for this transfer, and it is the student's responsibility to complete any and all necessary processes to be eligible for this programme. There may be additional costs, including applying for a new Visa from outside of the UK for international students associated with a transfer to the work placement programme.

Students may not register for both an International Year and a Work Placement Year.

Student Support

Students will be supported whilst on the Work Placement Year via the following methods:

- Regular contact between the student and a named member of staff who will be assigned to the student as their University supervisor. The University supervisor will be in regular contact with the student throughout the year, and be on hand to provide advice (pastoral or academic) and liaise with the Placement supervisor on the student's behalf if required.
- Two formal contacts with the student during the placement year: the University supervisor will visit the student in their placement organization at around 5 weeks after the placement has commenced, and then visit again (or conduct a telephone/video call tutorial) at around 15 weeks into the placement.
- Weekly supervision sessions will take place with the placement supervisor (or his/her nominee) throughout the duration of the placement.

Learning Outcomes

In addition to the learning outcomes specified in the main text of the Programme Specification, students who complete the 'with Work Placement Year' option will be able to:

1. Identify areas for skills development, in relation to a specific career or sector.
2. Demonstrate skills and attribute development through engagement with a placement.
3. Reflect on the broader personal and professional development throughout the placement experience.
4. Devise an action plan for future careers development.

These learning outcomes will be assessed through the non-credit bearing Work Placement Year module (NAT-30010) which involves:

Regulations

Students registered for the 'with Work Placement Year' option are subject to programme-specific regulations (if any) and the University regulations. In addition, during the Work Placement Year, the following regulations will apply:

- Students undertaking the Work Placement Year must successfully complete the zero-credit rated 'Professional Placement Year' module (NAT-30010).
- In order to ensure a high quality placement experience, each placement agency will sign up to a placement contract (analogous to a service level agreement).
- Once a student has been accepted by a placement organisation, the student will make a pre-placement visit and a member of staff identified within the placement contract will be assigned as the placement supervisor. The placement supervisor will be responsible for ensuring that the placement experience meets the agreed contract agreed with the University.
- The placement student will also sign up an agreement outlining his/her responsibilities in relation to the requirements of each organisation.

Students will be expected to behave professionally in terms of:

(i) conforming to the work practices of the organisation; and

(ii) remembering that they are representatives of the University and their actions will reflect on the School and have an impact on that organisation's willingness (or otherwise) to remain engaged with the placement.

Additional costs for the Work Placement Year

Tuition fees for students on the Work Placement Year will be charged at 20% of the annual tuition fees for that year of study, as set out in Section 1. The Work Placement Year can be included in your Student Finance allocation; to find out more about your personal eligibility see: www.gov.uk

Students will have to bear the costs of travelling to and from their placement provider, accommodation, food and personal costs. Depending on the placement provider additional costs may include parking permits, travel and transport, suitable clothing, DBS checks, and compulsory health checks.

A small stipend may be available to students from the placement provider during the placement but this will need to be explored on a placement-by-placement basis as some organisations, such as charities, may not have any extra money available. Students should budget with the assumption that their placement will be unpaid.

Eligibility for student finance will depend on the type of placement and whether it is paid or not. If it is paid, this is likely to affect student finance eligibility, however if it is voluntary and therefore unpaid, should not affect student finance eligibility. Students are required to confirm eligibility with their student finance provider.

International students who require a Tier 4 visa should check with the Immigration Compliance team prior to commencing any type of paid placement to ensure that they are not contravening their visa requirements.

23. Annex - Programme-specific regulations

Programme Regulations: MEng (Hons) Chemical Engineering

Final Award and Award Titles	MEng (Hons) Chemical Engineering MEng (Hons) Chemical Engineering with International Year MEng (Hons) Chemical Engineering with Work Placement Year
Intermediate Award(s)	BEng (Hons) Chemical Engineering Diploma in Higher Education Certificate in Higher Education
Last modified	n/a
Programme Specification	https://www.keele.ac.uk/qa/programmespecifications

The University's Academic Regulations which can be found on the Keele University website (https://www.keele.ac.uk/regulations/)[1] apply to and regulate the programme, other than in instances where the specific programme regulations listed below over-ride them. These programme regulations list:

- *Exemptions* which are characterised by the omission of the relevant regulation.
- *Variations* which are characterised by the replacement of part of the regulation with alternative wording.
- *Additional Requirements* which set out what additional rules that apply to students in relation to this programme.

The following **exemptions, variations** and **additional requirements** to the University regulations have been checked by Academic Services and have been approved by the Faculty Education Committee.

A) EXEMPTIONS

The clause(s) listed below describe where an exemption from the University's Academic Regulations exists:

For the whole duration of their studies, students on this Programme are exempt from the following regulations:

- **No exemptions apply.**

B) VARIATIONS

The clause(s) listed below describe where a variation from the University's Academic Regulations exists:

Variation 1: Condonement

EGN-30003 and EGN-30005 must be passed with a minimum module mark of 40% and are not eligible for condonement due to professional body requirements.

C) Additional Requirements

The programme requirements listed below are in addition to the University's Academic Regulations:

Additional requirement 1: Laboratory and Practical Classes

1. Any student failing to follow the health and safety guidelines in the laboratory will be asked to leave. This may include inappropriate dress, refusal to follow reasonable requests of staff, late attendance resulting in missed safety briefings, or attending under the influence of alcohol or other substances.

Additional requirement 2: Transfer between BEng and MEng Chemical Engineering

Regulation C6, paragraph 2.3 states that the rules governing eligibility for transfer onto an integrated masters programme shall be governed by the relevant Programme Regulations.

BEng Chemical Engineering students are permitted to transfer onto the MEng Chemical Engineering programme at any point up to the start of semester 2, Level 6 subject to having met any relevant progression criteria and with the approval of the Programme Director.

MEng Chemical Engineering students are permitted to transfer onto the BEng Chemical Engineering programme at any point up to semester 2, Level 6.

Additional Requirement 3: Transfer between different Engineering programmes

Chemical Engineering students are permitted to transfer between different engineering programmes at any point up to week 3, Level 5 subject to having met any relevant progression criteria and with the approval of the Programme Director.

Additional Requirement 4: International students only

Due to UK Home Office Visa (UKVI) restrictions, students are not able to transfer between programmes as stated in additional requirements 2 and 3 above, without the change meeting UKVI requirements. Therefore, it is recommended to speak with Immigration Compliance and Support (visa@keele.ac.uk) before requesting a programme transfer as this could affect current and future Visa options.

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[1] References to University Regulations in this document apply to the content of the University's Regulatory Framework as set out on the University website here https://www.keele.ac.uk/regulations/.

Version History

This document

Date Approved: 13 April 2026

Previous documents

Version No	Year	Owner	Date Approved	Summary of and rationale for changes