

UNDERGRADUATE PROGRAMME SPECIFICATION

Programme Title:	1. MEng Electrical and Electronic Engineering 2. BEng(Hons) Electrical and Electronic Eng
Awarding Body:	Staffordshire University
Teaching Institution:	Staffordshire University
Final Awards:	1. MEng Electrical and Electronic Engineering 2. BEng(Hons) Electrical and Electronic Eng
Intermediate Awards:	1. BEng(Hons), BEng, DipHE, CertHE 2. BEng, DipHE, CertHE
Mode of Study:	1. Full-Time 2. Full-Time or Part-Time
UCAS Codes:	
QAA Subject Benchmarks:	Engineering
JACS Code:	H610 / H620
Professional/Statutory Body:	None
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EDUCATIONAL AIMS OF THE PROGRAMME

The aim of the programme is to provide students with an education in the fields of engineering and engineering systems. This will contribute to the student's formation as a professional engineer and be the first step in achieving Chartered Engineer status.

The BEng and MEng Engineering programmes aim to offer an enjoyable intellectually demanding and stimulating programme of study and to create graduates who are able to:

- undertake design work
- use mathematical and computer models
- use business and management principles
- solve engineering problems
- undertake practical work
- demonstrate awareness of leading edge knowledge
- demonstrate a life-long commitment to learning and further study as part of professional development
- show knowledge and understanding of commercial and economic context of engineering
- use management techniques to achieve engineering objectives within that context;
- understand and embody in their work the requirement for engineering activities to promote sustainable development

What is distinctive about this Programme?

The Faculty of Computing, Engineering and Sciences at Staffordshire University is a leading centre for innovation and practical scholarship. The Faculty offers modern programmes of study, enterprise partnerships with industry and an active research programme.

The engineering programmes within the programme excite, engage and empower our students.

Additionally the MEng programme provides students with a more mathematically rigorous approach to engineering analysis, enabling graduates to innovate and stretch the boundaries of engineering knowledge in the working environment.

Accreditation for the partial fulfilment of the academic requirements for Chartered Engineer (CEng) status will be sought for the MEng and BEng(Hons) programme from the IET once the first cohort has graduated.

Visitors are impressed by the dedication and imagination of the teaching staff and by the energy and enthusiasm of the students.

The Faculty laboratories and technology centres are equipped with state-of-the-art software and hardware, which reflect the latest developments needed to support the students. The Faculty is continually expanding its resource base, often in partnership with industry sponsors. The Faculty also works to facilitate equality of access to its programmes and facilities.

The learning process adopted is one of constant self-exploration and experimentation. This distinct characteristic has acted as a catalyst towards the emergence of dynamic ideas amongst students and has made learning both enriching and refreshing.

The focus of the Faculty's teaching is practical study, underpinned by the application of leading edge academic knowledge to produce the graduates that employers want. Also the Faculty close contact with business and industry feeds back into the engineering programmes and gives a practical foundation and application to our research. All engineering programmes are designed to help the graduates enter employment.

Reflection on the achievements and experience in the modules, and a focus on formation as a professional engineer provide a Personal Development Planning (PDP) and employability theme to the student experience at all levels.

Other employability related modules and opportunities to be assessed on reflection on placement experience are available at Level 5 and 6. Besides the direct industrial relevance of much of the engineering programme curriculum, Final Year Projects be externally suggested and supported adding significantly to the employability of students choosing such topics.

The Faculty of Computing, Engineering and Science has a Placements Office. Staff in this office will provide the students with support in finding a placement for their Industrial experience module. The Faculty produces and issues an 'Industrial Placements Handbook' to all students considering going on a placement. This handbook gives full information on the aims, objectives, requirements and assessment of an industrial placement. In addition to consulting this document, there is a placements co-ordinator - the member of staff with specific responsibility to co-ordinate student placements and supervision.

Curricula are informed by research and enterprise in the Faculty. Significant work in areas like renewable energy, medical technology, communications, thermoelectricity, and sustainable automotive systems allow undergraduate students to benefit in final year modules such as Modern Power Plant Technology, Energy Management, Advanced Vehicle Design, Advances in Electrical and Electronic Engineering and Communications which provide the opportunity for staff to bring their work into the learning environment.

Each year the Faculty Computing, Engineering and Technology hosts a Graduate Exhibition (GradEx). The purpose of the GradEX exhibition is to showcase the work of our students across all of the Faculty's programmes and provides an exciting opportunity for our students. The students' entries are normally based on their project work and therefore give a feel for the breadth of opportunities our degrees lead to. A number of industrial and commercial organisations are involved in this – by sponsoring the event, judging and providing prizes.

The Staffordshire Graduate

Engineering is the most versatile profession.

Our technological world , e.g. laptop computers, wind turbines, the International Space Station, smart phones, hybrid vehicles, MRI scanners, ASIMO etc. has been created and shaped by engineers.

Engineering is also the subject area that has facilitated and enhanced other areas of creativity like architecture and digital media such as music and film.

Engineers are people who are able to conceive and, through their understanding of the physical world, realise their ideas.

Engineering graduates from this programme will be: a source of creativity; maths and science-smart professionals; problem solvers with practical and technical skills; designers of products, processes and systems; multi-faceted team members having planning, project and business skills including cost, safety, reliability and time management; lifelong learners.

The quality of the Engineering programme and its graduates have, through programme accreditation, been acknowledged by international engineering Institutions (Institution of Mechanical Engineers, IMechE, Institution of Engineering and Technology, IET) as having a set of skills appropriate for the 21st global workplace mirroring those of the Staffordshire graduate.

In this respect the Engineering programme facilitates:

Discipline Expertise through an integrated teaching and learning approach from experienced staff leading to an understanding of the forefront of knowledge in the chosen field and preparing students for exposure to research informed delivery in final year modules. Students also have the opportunity to attend Professional Engineering Institution (IMechE, IET) sponsored research and development seminars on campus given by practising industrial engineers.

Professionalism by introducing students to the nature of an engineering career in early modules and throughout their studies. New students are also introduced to, and encouraged to join, relevant Professional Engineering Institutions early on in their studies. The programme is professional engineering institution accredited and therefore after a period of further study or training and experience, programme graduates are considered to be suitable for professional or chartered engineer status.

Global Citizenship by emphasising global issues and the globalised economy in the context of design and manufacture generally and specifically in subjects and modules that underpin the environmental agenda.

Communication and Teamwork by utilising teaching, learning and assessment methods that provides opportunities for learners to become effective written and oral communicators/presenters and be able to interact appropriately with a range of colleagues

both individually and in networked teams reflecting industrial modus operandi. In particular all students undertake a major individual project dissertation in their final year.

Reflective and Critical Learning by ensuring that students have the ability to carry out inquiry-based learning and critical analysis. This is the essence of the engineering profession as engineers are problem solvers and creator of opportunities. Module assessments encountered at the latter stages of study in particular tend to be open-ended in solution facilitating this type of learning. Part-time students and those returning from placement are given further opportunity to reflect on their 'real-world' work experiences through bespoke modules recognising the value of this aspect of their experience.

Lifelong Learning by emphasising systems design principles and transferable core skills, e.g. being technologically, digitally and information literate, thus equipping the engineers of the future with the capability to pursue the independent learning and professional development that is expected from a professional engineer.

Employability, Enterprise and Entrepreneurship through the delivery of specifically targeted modules in the areas of business, innovation and enterprise developing the work-ready attributes of the programme graduates.

As part of their learning students will also be exposed to seminars and lecturers from contemporary business practitioners.

Students on the MEng programme take a 60 credit 'Industrial Based Project' module as part of their level 6 studies. This will be a student-identified or university career service -assisted industrial learning experience enhancing their employability at the end of their degree.

Shorter work experience opportunities are also available.

Graduates from the programme are likely to find employment in the following areas of engineering:

- Automotive industries
- Agriculture
- Aviation industries
- Building services
- Construction
- Consultancy
- Defence
- Electricity generation and transmission
- Medical and pharmaceuticals
- Manufacturing
- Mass transport
- Nuclear energy
- Oil and gas
- Renewable energy
- Robotics and control
- Water industry

Recent first employment destinations for Electrical and Electronic Engineering graduates includes: ABB, Alstom, Astrazeneca, Bentley, Caterpillar, Capula, DESG, Electricity North West Ltd, JCB, Jaguar Land Rover, Network Rail, Rolls-Royce and Siemens.

PROGRAMME OUTCOMES

What will this programme teach me to do? At the end of your studies you should be able to:

MEng Programme Outcomes

Knowledge & Understanding Demonstrate a systematic understanding of a significant body of knowledge which is at the forefront of the Electrical and Electronic Engineering discipline.
Learning Demonstrate the independent learning ability required to advance your knowledge and understanding and to develop new skills to a level to continue professional development.
Enquiry Demonstrate a comprehensive understanding and critical evaluation of methodologies and techniques applicable to your own research or advanced scholarship and, where appropriate, propose new hypotheses.
Analysis Demonstrate a critical awareness and evaluation of current research, advanced scholarship, contemporary problems and/or new insights, much of which are at, or informed by, the forefront of Electrical and Electronic Engineering.
Problem Solving Evaluate complex issues both systematically and creatively, making sound judgements in the absence of complete data, and employ appropriate decision-making in complex and unpredictable situations.
Communication Communicate your conclusions clearly to specialist and non-specialist audiences.
Application Demonstrate originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret the Electrical and Electronic Engineering body of knowledge.
Reflection Demonstrate the qualities and transferable skills necessary for employment requiring the exercise of initiative and personal responsibility, self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level.
Team Working Lead, manage and organise teams effectively.

PROGRAMME OUTCOMES

What will this programme teach me to do? At the end of your studies you should be able to:

BEng(Hons) Programme Outcomes

Knowledge & Understanding Demonstrate a systematic understanding of key aspects in Electrical and Electronic Engineering and the acquisition of coherent and detailed knowledge from the forefront of the discipline.
Learning Demonstrate and show understanding of the uncertainty, ambiguity and limits of knowledge.
Enquiry Deploy accurately established techniques of analysis and enquiry and initiate and carry out projects appropriate to Electrical and Electronic Engineering.
Analysis Describe and comment on current research and practice in Electrical and Electronic Engineering and critically evaluate arguments, assumptions, concepts and data (including incomplete data) to make judgements.
Problem Solving Develop appropriate questions to achieve a solution, or identify a range of possible solutions, to a problem and use decision making in complex and unpredictable contexts.
Communication Communicate and analyse information, ideas, problems and solutions to both technical and non-technical audiences.
Application Apply the methods and techniques learned to review, consolidate, extend and develop Electrical and Electronic Engineering solutions.
Reflection Manage their own learning, exercise initiative, personal responsibility and demonstrate the learning ability, qualities and transferable skills necessary for employment or further study of a professional or equivalent nature.
Team Working Manage and organise team working activities effectively.

AWARD OUTCOMES

There is a demand within the engineering industry for systems level designers with a good understanding of hardware and software issues and the underlying principles of their operation. These awards aim to produce graduates who are equipped to deal with the complex and frequently changing world of modern electronic systems design. By emphasising systems design principles and transferable core skills the awards also equip the engineers of the future with the capability to pursue the independent learning and professional development that is expected from a professional engineer. Graduates will be very well equipped to deal with the variety of design challenges to be found in a wide range of scientific and engineering environments.

Modern systems designers are required to have an understanding of areas such as device selection and hardware/software trade-offs, cost, reliability analysis and design for manufacture. This requires a fundamental understanding of the operating principles of different types of systems in order to be able to make informed choices. The awards focus on key engineering skills and illustrate, through the use of examples and problem-based learning, their application to relevant areas such as hardware and software design, communication systems, networks, and computer architecture. A number of key technical skills are developed as threads throughout the awards in order to ensure the correct depth of knowledge within these areas.

Electrical Engineering covers the activities associated with the generation, transmission, distribution and supply of electricity. Higher level engineering and professional skills are increasingly being required by the electrical engineering sector, and offer an opportunity for graduate engineers to become involved in large scale implementation and adoption of new technologies. The existing electrical supply network is being modernised, and electrical power engineers are needed to meet the challenges placed on the electrical distribution network by the growth of smaller generation and renewable technologies. The electrical industry is one of the UK's largest industrial sectors and plays a key role in the UK's economy. Graduates find employment in electrical power generation, transmission and distribution; the renewable energy sector; rail and road transport networks; industrial manufacturing; construction and building services; petrochemical; telecommunications; the Ministry of Defence and other defence related industries; and specialist engineering and consultancy activities.

The BEng(Hons) and MEng Electrical and Electronic Engineering Award reflects current industrial requirements, and was developed in conjunction with Alstom. The University has a strong relationship with the Alstom group of companies, who specialise in the transmission and distribution of energy, develop medium and high voltage substations and technologies, and the management of worldwide power grids; and also maintains close links with; ABB; Siemens; and JCB. The BEng(Hons) Electrical Engineering Award is accredited by the Institute of Engineering and Technology (IET), and provides the education foundation necessary in order to apply for professional registration with the Engineering Council UK.

PROGRAMME STRUCTURE, MODULES AND CREDITS

Programme Title: MEng Electrical and Electronic Engineering

L E V E L 4	Teaching Block 1	ELEC40221 Electrical and Electronic Principles (30 credits)	MECH40553 Measurements and Design (30 credits)	MECH40463 Introductory Mechanics and Fluids (15 credits)	MATH40312 Mathematical Foundations for Engineers (15 credits)
	Teaching Block 2			ELEC40237 Communication Principles (15 credits)	ELEC40223 Professional Engineering Skills (15 credits)

Note: To progress to Level 5 120 credits at Level 4 must be passed.

*See Mathematics 'Streaming'

L E V E L 5	Teaching Block 1	ELEC50401 Signals, Systems, and Embedded Software I (30 credits)	MATH50293 Engineering Maths with Applications (30 credits)	ELEC50229 Electrical Power, Machines, and Drives (30 credits)	ELEC50225 Adv. Electrical/ Electronic Sim. & Control (15 credits)
	Teaching Block 2				MECH50699 Business, Innovation, and Enterprise in Eng (15 credits)

Note: To progress to Level 6 240 credits must be passed and an aggregate of at least 55% must be achieved at Level 5.

L E V E L 6	Teaching Block 1	ELEC60312 Power Electronics and Embedded Software II (30 credits)	Option (30 credits)	ELEC60310 Industrial-based Project (60 credits)
	Teaching Block 2			

Option:

ELEC60220 Digital Communications: Processing and Applications

ELEC60219 Power Systems and Engineering Analysis

L E V E L 7	Teaching Block 1	Option 1 (15 credits)	Option 2 (15 credits)	MECH70610 Sustainable Design and Manufacture (15 credits)	MECH70706 MEng Group Project (30 credits)
	Teaching Block 2	Option 3 (15 credits)	Option 4 (15 credits)	ELEC70311 Employability and Entrepreneurship (15 credits)	

Option 1 (TB1):

ELEC70264 Power Electronics in Utility Systems
ELEC70295 Advanced Power System Analysis

Option 2 (TB1):

ELEC70287 Digital Electronic Systems
MECH70581 Digital Signal Processing

Option 3 (TB2):

ELEC70296 Power System Protection
ELEC70263 Flexible AC Transmission Systems and Custom Power

Option 4 (TB2):

ELEC70288 Optical Fibre Communication Systems
COCS70513 Embedded Real-Time Systems

PROGRAMME STRUCTURE, MODULES AND CREDITS

Programme Title: BEng(Hons) Electrical and Electronic Engineering

L E V E L 4	Teaching Block 1	ELEC40221 Electrical and Electronic Principles (30 credits)	MECH40553 Measurements and Design (30 credits)	MECH40463 Introductory Mechanics and Fluids (15 credits)	MATH40312 Mathematical Foundations for Engineers (15 credits)
	Teaching Block 2			ELEC40237 Communication Principles (15 credits)	ELEC40223 Professional Engineering Skills (15 credits)

Note: To progress to Level 5 at least 90 credits at Level 4 must be passed.

*See Mathematics 'Streaming'

L E V E L 5	Teaching Block 1	ELEC50401 Signals, Systems, and Embedded Software I (30 credits)	MATH50293 Engineering Maths with Applications (30 credits)	ELEC50229 Electrical Power, Machines, and Drives (30 credits)	ELEC50225 Adv. Electrical/ Electronic Sim. & Control (15 credits)
	Teaching Block 2				MECH50699 Business, Innovation, and Enterprise in Eng (15 credits)

Note: To progress to Level 6 at least 210 credits must be passed including a minimum of 90 credits at Level 5. For part-time students only, a distance learning module MECH50542 Industrial Technical Skills can be taken in place of MECH50699 Business, Innovation, and Enterprise in Engineering.

L E V E L 6	Teaching Block 1	ELEC60312 Power Electronics and Embedded Software II (30 credits)	Option 1 (30 credits)	MECH60714 Engineering Project (30 credits)	Option 2 (15 credits)
	Teaching Block 2				Option 3 (15 credits)

Option 1:

ELEC60220 Digital Communications: Processing and Applications

ELEC60219 Power Systems and Engineering Analysis

Option 2:

ELEC60307 Advances in Electrical and Electronic Engineering

ELEC60274 Analogue and RF

MECH60543 Industrial Responsibility (Part time only)

MECH60559 Work placement module (Returning placement students only)

Option 3:

ELEC60228 Enterprise and Entrepreneurship

ELEC60313 Electronics, Design, and Testing

MECH60704 Robotic Systems

MECH60543 Industrial Responsibility (Part time only)

MECH60559 Work placement module (Returning placement students only)

*Mathematics 'Streaming'

Students entering Level 4 of the MEng/BEng(Hons) Programmes with A Level Mathematics or equivalent follow a standard mathematics route of 15 credits MATH40312 Mathematical Foundations for Engineers in Teaching Block 1.

Students entering Level 4 of the MEng/BEng(Hons) Programmes without A Level Mathematics will require extra support in Mathematics and follow a modified route to the same Level 4 output standard.

This is achieved by taking 15 credits "MATH40324 Quantitative Methods" (*a specific option module*) in Teaching Block 1, followed by 15 credits "MATH40313 Balancing Mathematics for Engineering (*an additional module*)". Allocation of a student to a particular Mathematics "stream" will be entirely based on qualifications presented on application and counselling by the Mathematics Teaching Team. See figure 1 below:

The above arrangements enable all students to achieve the mathematical standard required for level 5 entry.

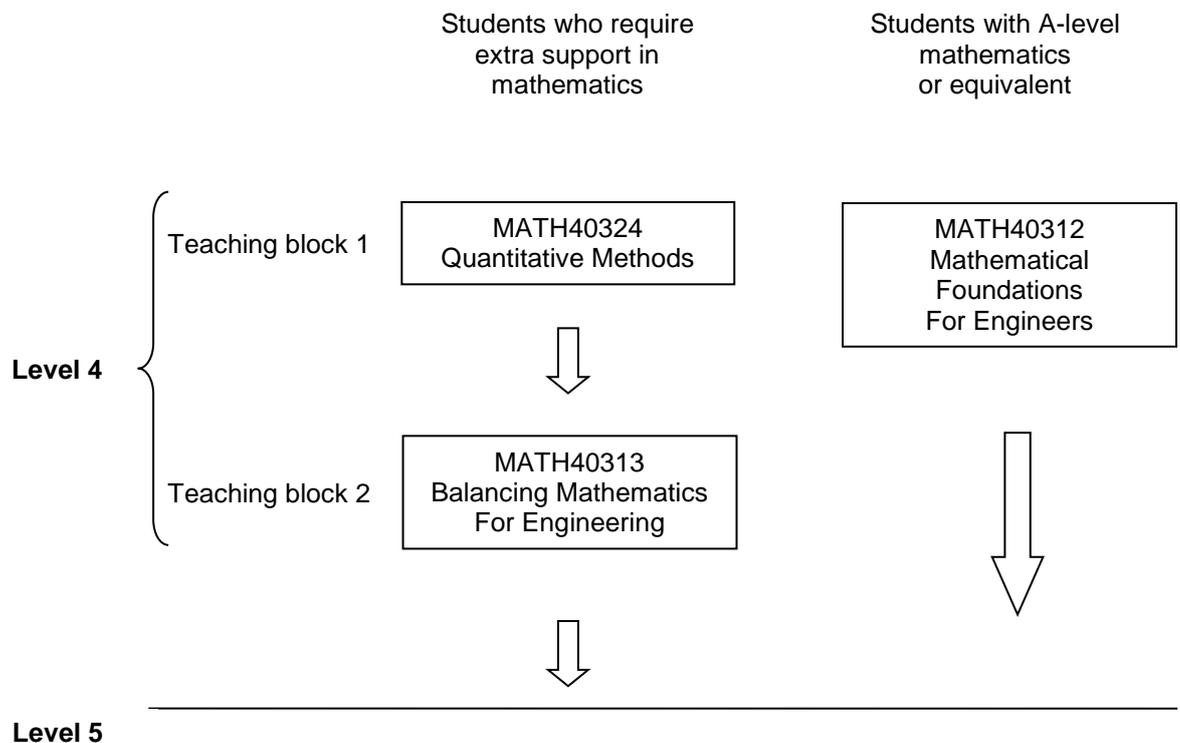


Figure 1: Level 4 Mathematics Curriculum Structure

HOW WILL I BE TAUGHT AND ASSESSED?

Teaching and Learning

The programme has been designed with a high degree of teaching commonality among programmes at lower levels with increasing divergence into individual areas of expertise by level 6.

For the most part this is explicit e.g. the Electronic Engineering and Electrical Engineering programmes are completely common at level 4.

The Mechatronics programme has 90 credits in common with these programmes. The remaining 30 credits, in the area of electronics principles, are common with the programme's Electrical and Electronic programmes.

Other aspects of commonality are implicit. For example CE20034-4 Introductory electronics and CE20033-4 Introductory Mechanics and Fluids comprise content delivered in other 30 credit modules and will be taught in physical and temporal parallel with them.

In this way the programme addresses the need to give students a flavour of their individual programmes at an early stage while accepting the practical requirement of module viability.

Student learning opportunities include e-learning and classroom-based learning and involve a broad spectrum of activities appropriate to the learning outcomes and the assessment methods. These activities range from entirely self-managed study, timetabled formal lectures, tutorials, laboratory based work and presentations. Students have opportunities to use and develop theoretical knowledge, computer based models, and to design, implement and test. The transferable skills of presenting, writing, discussing, working with others, and managing one's own time are developed throughout the programme.

A review of learning opportunities with reference to relevant assessment methods is presented below:

Laboratory assignments / practical work / log book records / reports - Computer based exercises - Simulation exercises

Many learning opportunities are provided by practical work of some form. This occurs for example in laboratory based assignments for which students maintain a log book (whilst they are in the laboratory) and produce a report. The practical work may take the form of undertaking experimental test measurements, building items of technical equipment, undertaking design work, implementing web-based or other computer-based or media-based code or solution, or implementing an individual design project. Technical instruction and support is available wherever appropriate.

Generally practical work is linked to theoretical concepts and analytical skills developed in lectures and tutorials.

Presentations and oral examinations

Opportunities are provided in assignments in which presentations, as well as project management techniques, team working, design and written reports, play a part. Final year projects include presentations and interviews at two stages throughout the year.

Students also participate in a 'Graduate Exhibition' showing their final year project work. This exhibition is attended by people from industry, staff from the University, and parents and friends of the students.

Problem solving exercises

Problem solving activities are undertaken by the students at all levels. As a formal component of modules, tutors set problems for students to tackle, and on which assessment may be based. The level of challenge ranges from fundamental knowledge to those that develop a deeper understanding. These are often generated entirely by the module tutors based on their own experience. The challenges in student projects which integrate learning, involve solving a range of problems requiring analytical and design skills, knowledge and time management.

Design tasks

Design skills are introduced and developed through tutorials, problem solving exercises, and final year projects. Design requires knowledge and understanding, a requirement and specification, the tools and techniques to design, realise and test, and the project management skills to manage the process.

Individual projects and reports

All students undertake a final year project and produce a proposal, and final report. Students are required to review published literature and other relevant published works, and to set their work in the context of other work in the field. The final assessment includes presentation (using power point) and interview. These are formally assessed as part of the marking of the Project.

The programme follows the QAA document on engineering benchmark statement ensuring that:

- The methods of teaching, learning and assessment are constructed so that the learning activities and assessment tasks are aligned with the learning outcomes that are intended in the programme
- For students to achieve a satisfactory understanding of engineering the expectation is that they will have significant exposure to hands-on laboratory work and substantial individual project work
- Teaching needs to be placed within the context of social, legal, environmental and economic factors relevant to engineering.
- Assessment should form part of the learning process and requires that there is 'sufficient opportunity for students to demonstrate that they have met the threshold in all components'

Group Projects

In the professional engineering environment, team building and group work is essential to meeting client demands and short deadlines. The awards provide multiple assessment opportunities at all levels enabling students to gain experience in a range team membership roles e.g. coordinator, innovator, finisher and understand that success is determined by a mix

of positive interdependence and individual accountability.

Industrial-based Project (MEng)

The MEng 60-credit level 6 Industry based project will further help enhance your technical skills and employability as well as giving a contextual background to your academic studies.

Assessment

The assessment methods used with the programme are varied, formative and develop students' transferable skills as well as their technical ability. Students' ability to plan, judge, communicate complex issues, solve problems logically, and develop original solutions, in appraising critically the work of others, and in managing their own learning are all significant contributors to determining a students' mark for a module. In addition a student's technical understanding of the context of their work alongside that of others, of the breadth of their subject of study, and of the depth of their specialist area of study, also are key to the assessment process.

Assessment methods applied include:

- Unseen examinations / class tests.
- Laboratory assignments / practical work / log book records / reports.
- Learning Portfolio
- Case Studies
- Presentations and oral examinations
- Problem solving exercises
- Essay assignments
- Design tasks
- Computer-based/Simulation exercises
- Poster displays
- Individual projects and reports and Graduate Show presentations
- Assessment of work-based learning

Assessment is anonymously marked with tutors using clear published criteria and sample verification by both internal second marker and external examiner is undertaken to ensure parity of marking standards.

Feedback is provided in a variety of ways including written comments on assignment and cover sheets by the assessor, formally by module tutors reviewing coursework and examination performance in one-to-one student appraisal sessions; and informally by personal tutors discussing areas of improvement.

The range of assessment techniques includes exposure to formal examinations, principally to assess knowledge, understanding, application and closed problem solving.

ADDITIONAL INFORMATION

Entry Requirements (including IELTS score)

What qualifications would I need to join this programme?

The entry requirements for the programme are normally:

MEng

- 320 UCAS points.
- A levels: ABB or BBC plus C at AS. Must have a pass in A level Mathematics, Physics or related engineering subject.
- Students without A level Mathematics may still be eligible for entry as described in the Programme Structure.
- BTEC: DDM in an Engineering discipline.

BEng(Hons)

- 280 UCAS points.
- A levels: BBC or CCC plus C at AS. Must have a pass in A level Mathematics, Physics or related engineering subject.
- Students without A level Mathematics may still be eligible for entry as described in the Programme Structure.
- BTEC: DMM in an Engineering discipline.

An applicant can use their previous experiences to gain admission to the programme; admission to a module; admission at an intermediate stage in the programme (known as Advanced Standing); or to gain exemption from part of the programme through the University Recognition of Prior Learning (RPL) Scheme. These previous experiences can be certificated learning and/or experiential learning.

The current IELTS score is 6.0.

Disability Statement

Staffordshire University operates a policy of inclusive teaching and learning to ensure that all students have an equal opportunity to fulfil their educational potential. Details about how to apply to have your needs assessed can be found at:

http://www.staffs.ac.uk/courses_and_study/disabled_students/index.jsp

AWARD SPECIFIC INFORMATION

1. Assessment Component Pass Marks

Students are required to gain at least 30% (40% on Level 7 modules in MEng year) in each component of assessment, and get an aggregate mark of over 40% (50% on Level 7 modules in MEng year) in order to pass a module.

2. Compensation

A maximum of 30 credits may be awarded a compensated pass. To be eligible for compensation student must achieve an overall module score of at least 35% (40% on Level 7 modules in MEng year) with all individual assessment component scores at 30% (40% on Level 7 modules in MEng year) or above.

3. Non-compensatable modules

The importance of the Final Year Project (MECH60714, 30 credits) and the Group Project (MECH70706, 30 credits) modules is recognised by it being **non-compensatable**. Satisfactory completion of these modules confirms achievement of a range of learning outcomes and a commitment to development as an engineer and is vital in demonstrating that graduates from the programme meet nationally and internationally accepted standards.

4. Transfer/Progression from BEng(Hons) to MEng

Students enrolled on MEng progress to its distinctive Level 6 and 7 subjects to a satisfactory performance at Levels 4 and 5, typically based on a Level 5 aggregate of 55% or above (including compensations), and subject to counselling. Similarly, progression to Level 7 requires all modules at Undergraduate Level to have been passed. (See Postgraduate Regulations Section 1.5).

All candidates who apply for the BEng(Hons) programmes initially but who demonstrate reasonable academic performance at the end of Level 5 (Overall aggregate of 55% or above at Level 5) have the opportunity to transfer to the MEng programmes or to continue with the BEng(Hons) programmes. An interview will be offered by the Award Leader and the Admissions Tutor(s) in order to provide guidance and support with regards to progression and placement. Please note that a successful interview itself is not a progression requirement. A progression/transfer diagram is shown below.

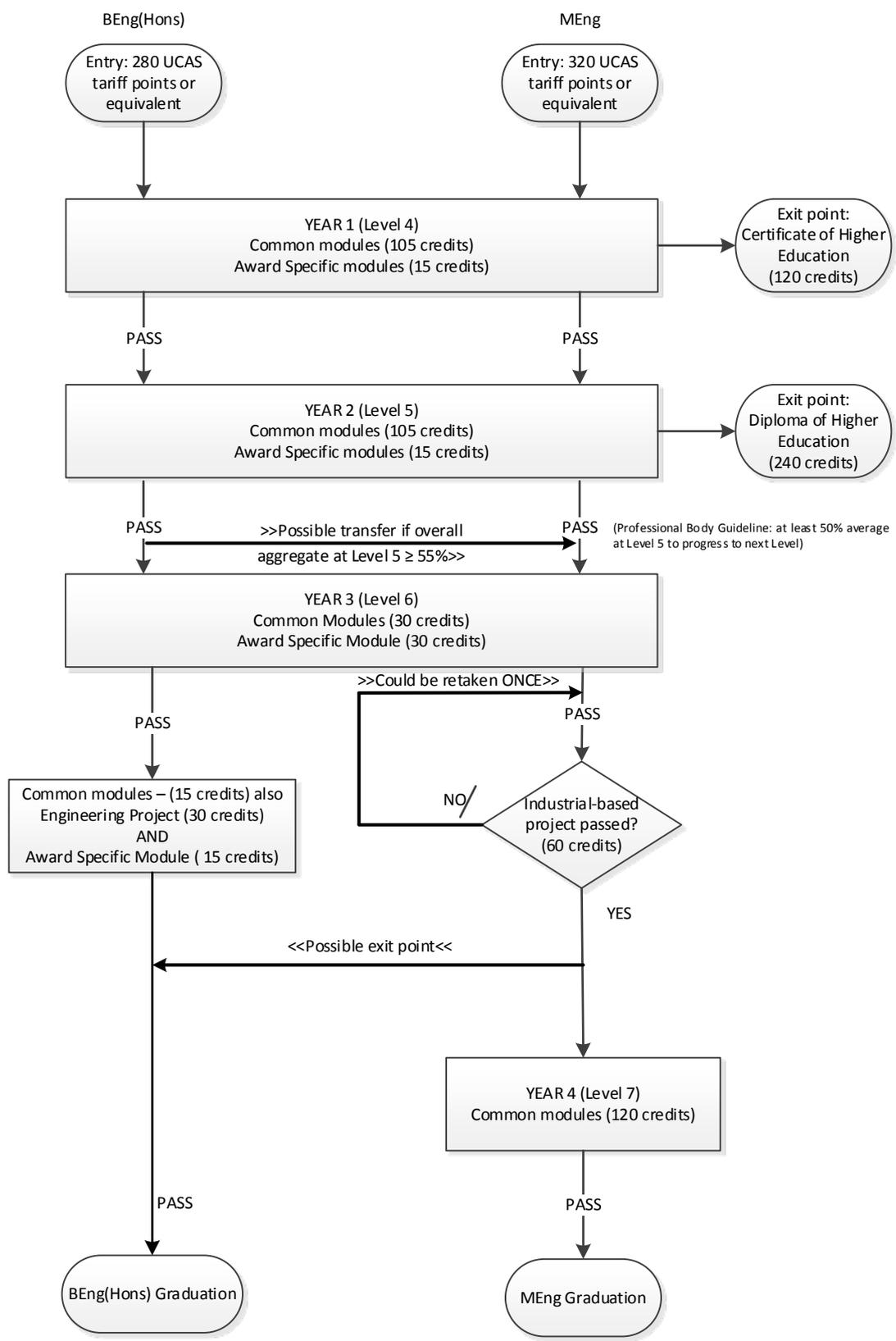
5. Classification of MEng

- Students passing MEng with an average >70% will be awarded MEng with Distinction.
- Students passing MEng with an average 60% – 69.99% will be awarded MEng with Merit.
- Students passing MEng with an average 50% - 59.99% will be awarded MEng.

6. MEng to BEng(Hons) transferability

MEng candidates may request to transfer to the corresponding BEng (Hons) award (please refer to programme structures). The Award Team will offer guidance and support to students in these instances.

Further information about the programme can be found in the relevant Student Handbook and on the University Website. This includes information about optional modules, learning outcomes at levels below honours, student support, and academic regulations.



Progression / Transfer Route

THE STAFFORDSHIRE GRADUATE

The Staffordshire Graduate represents a set of qualities that the University passionately believes is necessary for success in the 21st century. The Staffordshire Graduate is a reflective and critical learner with a global perspective, prepared to contribute in the world of work.

The table below indicates where, within your programme, these characteristics are addressed:

PROGRAMME TITLE:	MEng/BEng(Hons) Electrical and Electronic Engineering	
Characteristic	Programme Module(s) including level and number of credits	Method of Assessment
Work-ready and employable	ELEC40223 Professional Engineering Skills (15 credits)	Coursework (100%) Laboratory assignments utilising software
	MECH50542 Industrial Technical skills (15 credits)	Coursework (100%) Report, presentation and interview
	MECH50699 Business, innovation and entrepreneurship in engineering (15 credits)	Coursework (100%) Case study/business plan portfolio
	MECH60543 Industrial Responsibility (15 credits)	Coursework (100%) Report, presentation and interview
	MECH60714 Engineering Project (30 credits)	Coursework (100%) Report, presentation and interview
	MECH60559 Work placement module (15 credits)	Coursework (100%) Report, presentation and interview
	ELEC60228 Enterprise and Entrepreneurship (15 credits)	Coursework (100%) Report and presentation
Understanding of enterprise and entrepreneurship	ELEC40223 Professional Engineering Skills (15 credits)	Coursework (100%) Laboratory assignments utilising software
	MECH50699 Business, innovation and entrepreneurship in engineering (15 credits)	Coursework (100%) Case study/business plan portfolio
	MECH60714 Engineering Project (30 credits)	Coursework (100%) Report, presentation and interview
	MECH60559 Work placement module (15 credits)	Coursework (100%) Report, presentation and interview
	ELEC60228 Enterprise and Entrepreneurship (15 credits)	Coursework (100%) Report and presentation
Understanding of global issues and their place in the global economy	ELEC40221 Electrical and Electronic Principles (30 Credits)	Coursework (100%) Lab Portfolio
	MECH50542 Industrial Technical skills (15 credits)	Coursework (100%) Report, presentation and interview

	ELEC50401 Signal, Systems and Embedded Software 1 (30 Credits)	Coursework (50%) Examination (50%)
	MECH60559 Work placement module (15 credits)	Coursework (100%) Report, presentation and interview
	MECH60714 Engineering Project (30 credits)	Coursework (100%) Report, presentation and interview
	ELEC60228 Enterprise and Entrepreneurship (15 credits)	Coursework (100%) Report and presentation
	ELEC60307 Advances in Electrical and Electronic Engineering (15 Credits)	Coursework (100%) Case Studies
Communication skills	ELEC40221 Electrical and Electronic Principles (30 Credits)	Coursework (100%) Lab Portfolio
	ELEC40223 Professional Engineering Skills (15 credits)	Coursework (100%) Laboratory assignments utilising software
	MECH50542 Industrial Technical skills (15 credits)	Coursework (100%) Report, presentation and interview
	ELEC60312 Power Electronics and Embedded Software II	Coursework (100%)
	MECH60714 Engineering Project (30 credits)	Coursework (100%) Report, presentation and interview
	MECH60559 Work placement module (15 credits)	Coursework (100%) Report, presentation and interview
	MECH60543 Industrial Responsibility (15 credits)	Coursework (100%) Report, presentation and interview
Presentation skills	ELEC40223 Professional Engineering Skills (15 credits)	Coursework (100%) Laboratory assignments utilising software
	MECH50542 Industrial Technical skills (15 credits)	Coursework (100%) Report, presentation and interview
	MECH60704 Robotic Systems (15 credits)	Coursework (100%): Report and presentation
	MECH60559 Work placement module (15 credits)	Coursework (100%) Report, presentation and interview
	MECH60714 Engineering Project (30 credits)	Coursework (100%) Report, presentation and interview
	MECH60543 Industrial Responsibility (15 credits)	Coursework (100%) Report, presentation and interview
The ability to interact confidently with colleagues	ELEC40223 Professional Engineering Skills (15 credits)	Coursework (100%) Laboratory assignments utilising software
	MECH50542 Industrial Technical skills	Coursework (100%)

	(15 credits)	Report, presentation and interview
	MECH60543 Industrial Responsibility (15 credits)	Coursework (100%) Report, presentation and interview
	MECH60559 Work placement module (15 credits)	Coursework (100%) Report, presentation and interview
	MECH60714 Engineering Project (30 credits)	Coursework (100%) Report, presentation and interview
	MECH60559 Work placement module (15 credits)	Coursework (100%) Report, presentation and interview
Skills of team working	ELEC40223 Professional Engineering Skills (15 credits)	Coursework (100%) Laboratory assignments utilising software
	ELEC40221 Electrical and Electronic Principles (30 Credits)	Examination (50%) Coursework (50%) Lab Portfolio
	MECH40553 Measurements and Design (30 credits)	Coursework (100%) Team assignment/personal lab logbook
	MECH50542 Industrial Technical skills (15 credits)	Coursework (100%) Report, presentation and interview
	MECH50699 Business, innovation and entrepreneurship in engineering (15 credits)	Coursework (100%) Case study/business plan portfolio
	MECH60543 Industrial Responsibility (15 credits)	Coursework (100%) Report, presentation and interview
Ability to carry out inquiry-based learning and critical analysis	MECH40553 Measurements and Design (30 credits)	Coursework (100%) Team assignment/personal lab logbook
	MATH40312 Maths Foundations for Engineers (15 credits)	Coursework (100%):Phase tests
	ELEC50401 Signal, Systems and Embedded Software 1 (30 Credits)	Coursework (50%) Examination (50%)
	MATH50293 Engineering Maths with Apps (30 credits)	Coursework (50%):Software based Examination (50%)
	ELEC60312 Power Electronics and Embedded Software II	Coursework (100%)
	MECH60714 Engineering Project (30 credits)	Coursework (100%) Report, presentation and interview
Technologically, digitally and information literate	ELEC40223 Professional Engineering Skills (15 credits)	Coursework (100%) Laboratory assignments utilising software
	MATH50293 Engineering Maths with Apps (30 credits)	Coursework (50%):Software based Examination (50%)
	ELEC50401 Signal, Systems and Embedded Software 1 (30 Credits)	Examination (50%) Coursework (50%)
	MECH60714 Engineering Project	Coursework (100%)

Able to apply Staffordshire Graduate attributes to a range of life experiences to facilitate life-long learning	(30 credits)	Report, presentation and interview
	ELEC40223 Professional Engineering Skills (15 credits)	Coursework (100%) Laboratory assignments utilising software
	MECH50542 Industrial Technical skills (15 credits)	Coursework (100%) Report, presentation and interview
	MECH50699 Business, innovation and entrepreneurship in engineering (15 credits)	Coursework (100%) Case study/business plan portfolio
	ELEC60228 Enterprise and Entrepreneurship (15 credits)	Coursework (100%) Report and presentation
	MECH60559 Work placement module (15 credits)	Coursework (100%) Report, presentation and interview
	MECH60543 Industrial Responsibility (15 credits)	Coursework (100%) Report, presentation and interview
	MECH60714 Engineering Project (30 credits)	Coursework (100%) Report, presentation and interview

Notes:

Programme Modules

Indicate which module(s) within the programme develop this characteristic

Assessment

Indicate how achievement of the characteristic is assessed

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