Course Handbook

MSc Engineering Taught Awards

2016

STAFFORDSHIRE UNIVERSITY

Contents

Sources of Additional Information

This handbook provides useful information about your course, how it will be delivered and how you will be assessed. It does not try to give you all the information you will need during your time at the university. More information can be found in the following places:

On-Line Student Guide

The on-line student guide (http://www.staffs.ac.uk/student/guide) provides important information about the university and the services available to students, including:

- Welcome Week
- Student Cards
- e:VisionStaffs Portal
- Our Student Charter
- The Staffordshire Graduate
- Term Dates
- Timetabling
- Student accommodation
- Campus and travel information
- Finance, fees and support
- Disclosure and Barring Service applications
- Visas
- Course and module enrolment
- Recognition of Prior Learning
- Changing your award or modules
- Withdrawing or intermitting from your course
- University rules and regulations
- Disciplinary matters including academic misconduct

- Appeals and complaints
- Referencing and study skills (including guidance on completing assessments)
- What to do if you can't hand in work due to circumstances beyond your control
- Examinations
- Getting feedback on your work
- The student voice
- Employability and careers
- IT services and support
- Disability and dyslexia
- Counselling
- The Nursery
- The Multi-Faith Chaplaincy
- Graduation
- Certificates, Transcripts and Verification Letters

Module Handbooks

Your course is made up from a number of individual modules. Detailed information on each module is provided in separate module handbooks. Your module tutor will tell you how to access the handbook for their module.

The Blackboard On-Line Virtual Learning Environment (VLE)

Information and learning materials for your modules will be provided on the Blackboard on-line Learning Environment. Blackboard will form an important part of your learning experience. Please let your module tutor know if you encounter any problems accessing this material. You can access Blackboard at https://blackboard.staffs.ac.uk using your university username and password. If you have not done so already, please change your Blackboard default password (date of birth) to ensure others cannot access your account.

1. Welcome to the Faculty of Computing, Engineering and Sciences

The Faculty is home to three subject based Schools located on the Stoke-on-Trent campus. As well as our on-campus students we have many students who are learning away from our University campuses in Staffordshire – with many learners studying in educational partners both in and outside of the UK, work-based learners studying in their workplace and also distance learners from across the globe using the internet to interact with their tutors and peers. Consequently, you are now a student in one of the largest such faculty in UK universities, and we are delighted that you are one of our students. The Faculty is host to one of the first UK university computing departments, to science programmes which are some of the highly rated by students in the UK, and to an engineering scheme founded upon the needs of engineering employers. Your course of study will therefore be up to date and relevant, will be serviced by well qualified staff, and will also be geared to preparing you for life and employment after university. Our Staffordshire Graduate Pledge aims to help all of our students achieve what they want to in life.

As one of our students we expect you to work hard, to set high standards for yourself. To help you to succeed you will have access to excellent staff and facilities, and also to a range of student support services to help deal with your particular needs. Of course, to do this academic, administration and technical staff that you come across as part of your studies will readily advise and support you. Your part is to take your study seriously, to ensure that you set-aside appropriate time for your study, and to make full use of the diverse range of learning opportunities – both in class and outside of classes – provided by your course. It is important to us that you are successful and that you go on to be a good ambassador for the university.

Inevitably at the start of term you will be bombarded with a host of well-intentioned information. Some of that information is immediately important to start your studies to make sure that you are in the right place at the right time. Some information you will need later in your course e.g. about assessments, changing modules, extenuating claims etc. Whilst other information is about the services the University offers generally which you may need to utilise in the future. We suggest that you download this handbook and keep it for reference and familiarise yourself with the range of information it contains. This should be the first document of your own digital-archive - get into the habit of downloading essential documents like module descriptors and module handbooks when the course starts.

You are now part of the 'family' of Computing, Engineering and Sciences and we look forward to working with you to help you to succeed as a Staffordshire Graduate.

Very best wishes,

Professor Hastings McKenzie – Dean, Faculty of Computing, Engineering and Sciences

2. Welcome To Your MSc Engineering Course

On behalf of all the staff who contribute to the MSc Engineering Awards I would like to welcome you to your course. You have become one of the newest members of our family of fellow students and University staff who will support you during your studies with us.

I am sure you will find that all the staff in the Faculty are helpful and professional in everything they do. We will do our best to make you feel very welcome here. Please do not hesitate to contact the appropriate staff for any academic or personal matter.

I know you have already invested a lot of time, effort and even financial resources in getting to this stage of your career and joining us on this course. I am sure that you will want to maximise the return on the investment you have already made by achieving the best possible marks in all your assessments and leaving us with an MSc award. Success is not guaranteed so you will need to work hard and fully engage with your studies and all of your assessments. If you are struggling in any aspect of your university life please let us know. Everyone wants to help you to succeed. There are personal tutors, module tutors, course tutors and even specialist counsellors but we can't help you if we don't know you have a problem.

Your chosen course has been designed by academic and industrialists who are specialists in their field. The modules they have chosen to teach you should provide you with a deep understanding of your chosen engineering field. You will study a total of 8 modules spread over two semesters – some courses have options for you to choose from but most modules are required (known as core modules).

As you will soon find out your learning will involve significant technical challenges that may well stretch your ability. Attending all classes and having a good work ethic both in class and in your personal studies will help you to succeed on this course and you will then leave us as a fully-fledged engineering professional ready to embark on a career leading to Chartered Engineer status.

But do remember to enjoy your time at University to! Get involved in extracurricular activities through the students union. There are many clubs and societies you can join which you will enjoy and will help you to become a more complete and rounded person. For many people, when they reflect back, their time at University is the most fun, enjoyable and rewarding time of their lives. I hope it is for you!

Professor David Cheshire - Award Programme Manager: Taught Engineering Masters

3. Your Course Team

Programme Leader

Professor David Cheshire
Location: S117
Telephone: +44 (0)1785 353273
E-mail: d.g.cheshire@staffs.ac.uk
Role: overall management of the suite of taught masters courses

Individual Award Leaders

Aeronautical Engineering

Martin Fiddler
Location: S110
Telephone: +44 (0)1785 353557
E-mail: m.l.fiddler@staffs.ac.uk
Role: management of the Aeronautical Engineering Masters courses

Electronic Engineering

Dr Ian Taylor
Location: S116
Telephone: +44 (0)1785 353210
E-mail: i.taylor@staffs.ac.uk
Role: management of the Electronic Engineering Masters courses

Electrical Engineering

Professor Sarath B Tennakoon
Location: S104
Telephone: +44 (0)1785 353488
E-mail: s.b.tennakoon@staffs.ac.uk
Role: management of the Electrical Engineering Masters courses

Mechatronics Engineering

Dr David Dyke
Location: S116
Telephone: +44 (0)1785 353489
E-mail: david.dyke@staffs.ac.uk
Role: management of the Mechatronic Engineering Masters courses

Mechanical Engineering, Automotive Engineering and Autosport Engineering

Professor David Cheshire

Location: S117
Telephone: +44 (0)1785 353273
E-mail: d.g.cheshire@staffs.ac.uk
Role: management of the Mechanical, Automotive and Autosport Engineering Masters courses

Telecommunications Engineering

Dr Mohamad Patwary
Location: S110
Telephone: +44 (0)1785 353546
E-mail: m.n.patwary@staffs.ac.uk
Role: management of the Telecommunications Engineering Masters courses

Project Co-ordinator

Dr Ian Taylor
Location: S116
Telephone: +44 (0)1785 353210
E-mail: i.taylor@staffs.ac.uk
The role of the project Co-ordinator is:

- Managing and overseeing the administration of all the projects
- Managing the allocation of projects to individual students
- Liaison with the examiners to collate the project interview report and thesis, for consideration by the External Examiner

4. An Introduction to your Course

Your award has a set of written learning outcomes that describe what you should be able to do by the end of the course. These statements are designed to help you understand what you need to do to pass your course and receive your award. The outcomes for your course can be found in appendix A of this handbook.

Each module you study has separate learning outcomes which join together to enable you to demonstrate that you have achieved the overall learning outcomes for your award. The learning outcomes for your modules can be found in your module handbooks.

The specific learning outcomes for your award and modules have been matched to eight university wide learning outcome statements (knowledge and understanding; learning; enquiry; analysis; problem solving; communication; application; and reflection). These standard statements describe the abilities and skills all Staffordshire University students should demonstrate in order to pass their course. The statements have been designed to meet national expectations contained within the Framework for

[Higher Education Qualifications](). This ensures that the learning outcomes for your course are equivalent to similar courses at other UK universities and colleges. A table showing how your module learning outcomes have been aligned with the eight university learning outcome statements can be found in appendix B.

The design of your course has been guided by the national subject benchmark for Engineering based on UK-Spec written by The Engineering Council. The benchmark describes the defining characteristics of the subject area and the abilities and skills you should be able to demonstrate by the end of the course. A table showing how your course reflects the subject benchmark can be found in appendix B.

Your course aims to produce postgraduates with the knowledge and skills relevant to the changing needs of your chosen industry. This course will enhance your career opportunities within industry or you may choose to further your academic development through postgraduate research for a PhD degree.

In summary the general aims of the courses are as follows:

- To further develop the student's intellectual and creative powers, their judgement and problem solving ability together with an ability to communicate in a professional manner and to see opportunities beyond a particular programme of study.
- To provide specific skills and knowledge in the use of technological tools for the solution of engineering design and analysis problems.
- To develop research skills by expecting students to search for, and understand, original solutions.
- To contribute to the matching section leading to chartered engineer status.

4.1 Course Specific Aims

MSc Aeronautical Engineering

This is an award for the graduate Engineer who wishes to enhance their knowledge of flight engineering whether it be for fixed/rotary wing or subsonic/supersonic. The course covers a broad range of areas related to Aeronautical Engineering with modules in CAD, Reverse Engineering, Materials, FEA of mechanical systems, Aerodynamics, flight principles and power systems for aircraft.

MSc Automotive/Autosport Engineering

This is an award for the graduate Mechanical Engineer who wishes to focus or Automotive related topics. This specialisation is understandable as automotive products have a very high profile in everyday life and we are all exposed to them through travelling by motorcycle, car, bus or coach. The course covers a broad

range of areas related to Automotive Engineering with a choice of module in CAD, Reverse Engineering, Materials, Engineering Design Methodologies, FEA of Static and Dynamic mechanical systems, Vehicle Styling, Vehicle Aerodynamics, Vehicle Dynamics and Engine Design. The type of project undertaken for the MSc dissertation will determine the final award title.

MSc Electronic Engineering

This is an award for the graduate Electronic Engineer who wishes to broaden his or her knowledge base and become skilled in modern design techniques and be aware of new technological advances. The course provides coherent and up to date coverage of Electronic Engineering with modules in Analogue and Digital Systems, VLSI, Digital Signal Processing, Real Time Embedded Software and Telecommunications. The approach spans specification and design to realisation with particular emphasis on the application of industry standard CAD tools and DSP devices to develop solutions to practical engineering problems.

MSc Electrical Engineering

The advent of the Flexible AC Transmission Systems (FACTS) resulting from the application of power electronics to power systems is revolutionising the electrical power supply industry and there is a need for engineers skilled in Power Electronics and Power systems. The proposed MSc in Electrical Engineering is designed to fill this requirement and is unique in that at present no such course is offered by other higher education institution in UK. Staffordshire University is able to produce such a course due to the long history of research in this field with the support of the companies such as National Grid, Electricity boards, and Areva T&D.

MSc Mechanical Engineering

This is an award for the graduate Mechanical Engineer who wishes to enhance their knowledge of modern engineering simulation techniques and be aware of new technological advances. The course covers a broad range of areas related to Mechanical Engineering with modules in CAD, Reverse Engineering, Materials, Engineering Design Methodologies, FEA of Static and Dynamic mechanical systems, Thermodynamics, Energy conservation and Control Systems Design.

MSc Mechatronics

The Mechatronics award has been designed to offer students a selected range of modules covering current practice in Electronic Engineering, Mechanical Engineering Robotics, Automation and Control Engineering. Areas available include Real Time Embedded Systems Programming, Robotics, Power Semiconductor Devices, Motors

and Drives. Students will have a flexible choice of modules allowing them to specialise in their particular areas of interest.

MSc Telecommunication Engineering

Telecommunication engineering award encompasses the design and optimisation of communication networks for voice, data and multimedia applications. This award will provide students with an in-depth knowledge telecommunication networks, project management and research methods. The modules covering in this award includes Voice-over IP telephony, wireless networks, Digital Signal Processing, Telecommunications, Wireless navigation systems, Optical fibre communications, along with Research Methods & Project Management.

5. The Structure of your Course

Your course comprises three distinct components;
- A taught component consisting of 8 modules, each comprising 150 hours of learning time and allocated 15 credit points for each module. These modules are taught over two consecutive semesters – 4 modules in each semester.
- Optional industrial placement allocated 15 credits as additional studies.
- A major individual project known as a dissertation of up to 16 weeks or 600 hours duration that is allocated 60 credit points.

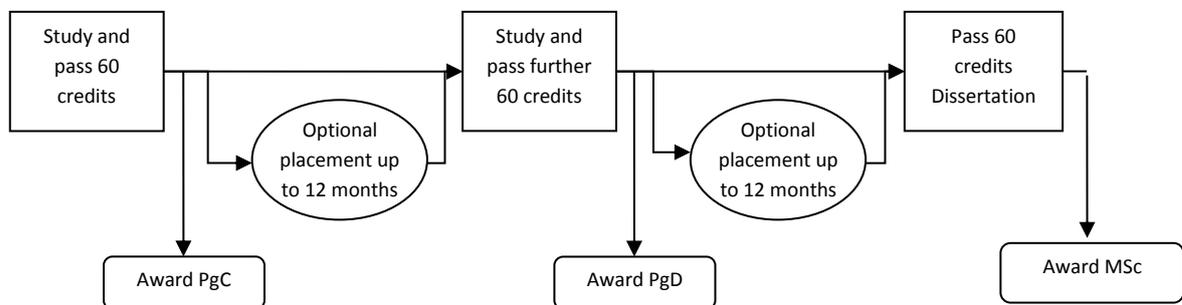The structure of your course, along with staged awards if you leave early, is illustrated in Figure 1.

Figure 1: MSc Engineering course structure.

5.1 Taught Programme

The courses are structured to allow students to directly enter the course at either the start of Semester 1 (September) or Semester 2 (January) with no academic penalty. Full-time students will study 4 modules each 12-week semester each attracting 15 credit points. Examinations are normally held in January and May.

After the examination period the second semester begins when the remaining 4 modules are studied. During YOUR second semester you will study a module entitled 'Research Methods & Project Management'. This module will start to prepare you for your MSc Project.

5.2 Industrial Placements (Internship)

The award structure allows for the option of an industrial placement (internship). This must be taken after passing at least 3 modules and before starting the project. Placements give an invaluable experience of a real working environment and as such are highly recommended. If you are an international student, your current visa will only be long enough to cover the taught elements of the course – it will not cover a placement. If you want this experience and are able to find a placement you will need to make the appropriate arrangements with the UK Visa and Immigration authority and apply for an extension to your visa to cover the placement period from your home country (We are bound to work under the rules of the UKVI which can change at a moment's notice so you should check with the International Office what the current regulations are before you undertake an application). The issuing of this extension is normally a formality but you must go through the process. You should start applying for placements early as you will be in competition with students from across the country. Express your interest to the placement office and your award leader. The placement office offers support in many ways including help in CV preparation and putting you in touch with companies. However you should take the initiative and look for opportunities. Internet recruitment sites, newspapers and technical magazines are good sources. This is an additional part of the course and does not count towards your final mark however future employers will look it on favourably. It is possible to take the placement in two parts so long as the total time does not exceed 12 months and you do not unnecessarily delay your academic studies.

The Faculty Placements Team is in the Careers Office B161 Brindley. Staff in these offices will provide you with support in finding a placement. However the final responsibility in securing a placement lies with the student.
The member of academic staff responsible for placements on you award is:

Martin Fiddler
Location: S110
Telephone: +44 (0)1785 353557
E-mail: m.l.fiddler@staffs.ac.uk

The role of the Placements Academic Coordinator is:

- To assist the student in finding a placement (in conjunction with the Placements office).
- To assess the potential placement and to liaise with the company to ensure it is appropriate for your course.
- To advise on all academic issues regarding the placement.
- To oversee and coordinate the assessment for the Work Placement module.

5.3 The Dissertation

This is the largest single component of the MSc scheme. It is a major undertaking of 16 weeks (plus assessment) or 600 hours duration and is worth 60 credit points. You will not normally be allowed to proceed to the project until you have passed at least 6 modules from the taught part of your course.

Students are encouraged to propose their own project provided that supervision expertise and appropriate equipment to complete the work is available within the faculty or at a sponsoring company. Project selection and approval of a project are by the mutual consent of the Project Supervisor and the student. The proposed project must be capable of being pursued at an adequate academic and intellectual level to justify the MSc Award. Alternatively projects can be selected from lists provided by the Faculty. The student must fill a project registration form and submit this to the MSc award administrator. At the time of registration the student will be given the expected date of completion.

The proposal, which is written under the guidance of the supervisor should clearly:
- Identify the project aims and objectives
- Include a project time schedule with milestones.
- Identify the resources needed for successful completion of the project
- Identify project outcomes
- Include the signatures of the student, the supervisor, and the employer wherever appropriate, to confirm the acceptance and commitment of all parties.

The signed project proposal should be lodged with the project coordinator who will appoint a moderator for the project.

Dissertation Assessment

A project assessment interview will take place at the end of the project period, following submission of the dissertation. The membership of the project assessment panel will normally consist of:
- The Project Supervisors
- The Project Moderator
- If appropriate an external representative, such as the employer
- The External Examiner. If the External Examiner is not present at the interview, the thesis, together with the interview panel's comments and recommendations, will be forwarded to the External Examiner for approval.

When examining the candidate the assessment will have regard to the candidate's demonstration of the following guiding factors:

- Understanding of fundamentals and ability to write these in a logical manner.
- The ability to research previous work in the same field and place the work in the context of published material.
- Scientific and practical experimental ability.
- Ability to hypothesise and draw conclusions.
- Ability to express ideas in a logical and concise form using relevant references to advantage.

The panel will jointly agree a mark that contains elements derived from the dissertations and oral presentation.

5.4 Time Scales

The timing of the completion of the three elements of the Awards depends on your start date, the speed of your progress and whether or not you undertake the industrial placement. The minimum period of study is approximately 12 months assuming you start in September, pass all modules at the first attempt, do not undertake a placement and complete you project in the shortest time. The average time taken to complete your studies is 15 months.

6. Employability

Throughout your course we provide opportunities to enhance your employability. We prepare you for the workplace by enhancing your organisation and time management skills. Group work opportunities are provided to develop your team working skills whilst other modules you study will improve your communication skills or enhance your use of technology so that you can hit the ground running when you start your career. Your dissertation will bring all of these aspects together and allow you to demonstrate your readiness for the work place.

Our past graduates have gone on to a wide variety of careers around the world as well as some moving on to postgraduate study.

7. Professional Recognition

The following awards are accredited by the IET in partial fulfilment of the academic for Chartered Engineer.

MSc Electronic Engineering
MSc Electrical Engineering
MSc Telecommunications Engineering
MSc Mechatronics
MSc Mechanical Engineering
MSc Automotive Engineering
MSc Autosport Engineering

The following awards are accredited by the IMechE in partial fulfilment of the academic for Chartered Engineer.

MSc Mechatronics
MSc Mechanical Engineering
MSc Automotive Engineering
MSc Autosport Engineering
MSc Aeronautical Engineering

Some newer awards are not yet accredited by any Institution but accreditation will be sought in the future.

8. Learning, Teaching and Assessment on your Course

8.1 Learning and Teaching

The taught part of named MSc awards consists of eight modules. Each module comprises 150 hours of student learning time. Typically, this would comprise 36 of timetabled class contact including formal lectures, tutorials, and laboratory based work. The remaining time is defined as student centred learning time and will normally be comprised of:

- Open learning approaches using commercial computer packages, commercial systems, and education material developed in house.
- Participation in broad-based design activities, involving both individual contributions and teamwork.
- Self-managed study.
- Industrial visits
- Field trips

A typical weekly timetable for full-time students on your course will be 12 hours of class contact. We suggest that you work for a further 28 hours per week on self-study, assignments and report preparations. It is expected that part-time students will enrol for at least two modules in each year.

8.2 Assessment

Each module of your MSc is assessed either entirely by In-Course Assessment (ICA) or by a combination of in-course assessments and a written examination. The ICA can take many forms; typical examples of ICA are laboratory and simulation based assignments, class test(s), group projects, assignments containing sample tutorial questions, and case studies. The weightings of different assessment methods for each module are given on the appropriate module descriptors which can be downloaded from the university website. Each written examination paper is normally up to 2 hours duration and is designed to assess the module outcomes and provide the candidates with a choice of questions to answer.

8.3 How to Submit Assessments

You must submit all pieces of assessment required for each module on or before the submission date for each piece of assessment. Failure to do so is likely to result in failure of the module overall. Each module tutor will explain how to submit your work. In most cases this will be an online submission through our Virtual Learning Environment called Blackboard.
There may be occasions when you are unable to submit or undertake a piece of assessment due to circumstances beyond your control. The University has put in place a procedure for dealing with such extenuating circumstances. You can find more information on the university's extenuating circumstances procedure at:
http://www.staffs.ac.uk/extenuating/

8.4 Feedback on your Work

It is important to understand what is meant by feedback. Most students think of feedback simply in terms of a member of staff annotating your submitted assessment and of course this is one important mechanism for feedback. This is not the only form of feedback. Feedback is also provided by your tutor verbally during tutorials and practical sessions as you work through formative exercises. In group work your peers, through class discussions or through peer assessment, may also provide you with feedback on your performance (especially if they think you are not pulling your weight!). Feedback on examinations and tests is also provided but may be generic or personalised depending on the module. Your dissertation supervisor will also give you feedback every time you discuss your progress. In fact virtually every time you speak to a member of academic staff about your work you are receiving feedback.

The University hopes that you will also play your part by ensuring that you collect feedback from the relevant sources as soon as it is available. The feedback is also designed to feed forward, i.e. to help you improve your performance on your next

assessment either in the same module, or in subsequent modules. So it is important that you use your feedback – for you to review it, understand it, reflect on it and apply it. To help you maximise the benefit of your feedback you can discuss specific feedback with module tutors and your personal tutor.

You will normally receive feedback on all your assessments within 20 working days following the date of submission of your assessment or actual date of the assessment (in the case of class tests). However, it may be the case that the 20 day rule for some assessments cannot be met for justified reasons (for example, modules on which a large number of students are enrolled). However, it is anticipated that this will apply to only a small number of modules on your course and, in those cases, the feedback return period will not exceed 25 days. The anticipated feedback return times for all assessments will be published in your module handbooks.

In order to ensure that feedback is provided within 20 days, in most cases, the marks for your work will be provisional and will be subject to second marking and final ratification by the external examiner and the appropriate Assessment Board at the end of the year.

Feedback for examinations will always be provided and should be available as soon as possible after the relevant examination. Where appropriate, feedback on examinations at the end of the last teaching block in the final year should be provided in the form of generic, group feedback through the University VLE.

At the latest, feedback should be provided at least four weeks before the next examination period.

8.5 External Examiners Appointed to your Course

External examiners help the university to ensure that the standards of your course are comparable to those provided by other universities or colleges in the UK. More information on the role performed by external examiners can be found at: www.staffs.ac.uk/externalexaminers/

The external examiners for your course are:

Name: Peter Carroll
Position: Senior Lecturer Engineering, Design and Manufacturing Systems
Institution: Birmingham City University

Name: Dr Hassan Nouri
Position: Reader in Engineering Design and Mathematics
Institution: University of the West of England

It is not appropriate for you to make ANY direct contact with your external examiner in particular regarding your individual performance in assessments. There

are other mechanisms you can use if you are unhappy with your results or other aspects of your award, such as the appeal and complaints procedures. External examiners have been informed that if they are contacted directly by students they should decline to comment and refer the student back to the University.

9. Communication

If the University needs to contact you they will do so via email using your ***University email account***. These contacts will often be very important and so it is imperative that you check your university email account regularly – at least daily. If you miss an important piece of information that is sent to you by email then you only have yourself to blame!

Course/Module specific information may also be communicated via Blackboard and again it is important that you regularly log in to check for updated information.

If you have a query about **anything** then the first point of contact should be the module tutor (if it is a module issue) or course tutor (if it is a more general issue). The engineering staff have an open door policy and you can approach them face-to-face at any time within usual working hours, but it is often better to use email to arrange an appointment to avoid waiting outside an office for long periods when the member of staff is teaching.

10. Support and Guidance

On enrolment you will be allocated a Personal Tutor and you will meet them during Welcome Week or in the first teaching week. The School of Engineering Personal Tutoring Scheme requires a number of group and individual meetings during the course of the year. However, if you have any problems or queries, you should contact your Personal Tutor to discuss them, as soon as possible – don't wait for a scheduled meeting.

Your personal tutor will not be able to solve every problem instantly but they will:

- be your first point of contact to give you advice or direct you to further support on academic and pastoral matters and University services;
- help you develop your academic skills;
- oversee your academic progress on your award including providing general feedback on your overall academic performance and help you enhance your learning by you reflecting on your feedback;
- encourage you to engage with all the opportunities the University has to offer to enhance your employability;
- encourage you to give feedback to the University on your modules and in course surveys;

- be prepared, if requested, to provide written references for you.

To ensure that you get the most from your personal tutorials your course team expect you to:

- maintain regular communication with your personal tutor, attending all meetings/making contact as arranged;
- proactively contact with your personal tutor when you need help or guidance which may impact on their academic performance or pose any risk to their withdrawal or progression;
- prepare for and engage in personal tutor-related activities;
- positively respond to advice provided to resolve any issues that you have with your studies.

Throughout your course you will meet the Module Tutors at the taught sessions. If you require additional advice and guidance, please do not hesitate to contact the Module Tutors, Personal Tutor, or Course Leader.

If you have any general concerns, the Faculty Student Guidance Advisor can help you with a wide range of educational issues as well as offering specialist information and support. A drop-in service is available, but to discuss an issue in depth you can then book an appointment. Further details can be found at http://www.staffs.ac.uk/support_depts/studentguidance/advisors/.

The University offers help and support in many areas including counselling, disability, learning support agreements, equality & diversity, international students, mature students etc. Information on university support services can be found in the on-line student guide (available at: http://www.staffs.ac.uk/student/guide)
The Student Advice Centre run by the Student's Union provides independent, impartial and confidential advice to students free of charge. More information on the Student's Union can be found at: https://www.staffsunion.com/.

11. The Student Voice

During the course you will have the opportunity to share your views and opinions on your modules, course and the university. Your feedback is key to ensuring that we get an accurate picture of what it is like to be a student at Staffordshire University and enables us to enhance the learning experience for current and future students.

In each module that you study you will have the opportunity to complete a module evaluation questionnaire and provide some feedback to help us continuously improve the classes that we deliver to you.

During your course you will be asked to take part in our annual Post Graduate Taught Experience Survey (PGTES). This is a much broader survey of your experiences throughout your time with us. When you receive the invite please engage as we love to know what we are doing right (and wrong!).

All students are invited to act as the Student Academic Rep for their course. Your course leader will, during Welcome Week, outline how Student representatives are arranged – if you want to volunteer to be a rep please let your course leader know. This role is important to the running of your course and also enhances your CV so do consider putting your name forward. All nominations are considered and then a Student representative is elected via the University election scheme. If you are chosen you will be expected to attend the Student liaison committee meetings which are held once each semester. The scheduled meetings are announced and students are invited to raise any points for discussion through their student representative.

12. Rules and Regulations

Your course is delivered and assessed according to the University's Academic Award Regulations. These can be accessed at: http://www.staffs.ac.uk/regulations

Further to this, the School of Engineering awards require post graduate students to gain at least 40% in each component of assessment, and get an aggregate module mark of over 50% in order to pass a module. Module handbooks will make clear what the components of assessments are for that module.

Appendix A – Award Learning Outcomes

OUTCOME HEADINGS	PgC	PgD	MSc
Knowledge and Understanding	Demonstrate an understanding of knowledge that is at the forefront of your chosen engineering discipline.	Demonstrate an understanding of a significant body of knowledge that is at the forefront of your chosen engineering discipline.	Demonstrate an understanding of a significant body of knowledge that is at the forefront of your chosen engineering discipline.
Learning	Demonstrate the independent learning ability required to advance your knowledge and understanding within the engineering discipline.	Demonstrate the independent learning ability required to advance your knowledge and understanding within the engineering discipline and especially your chosen specialised field.	Demonstrate the independent learning ability required to advance your knowledge and understanding, and to develop new skills to a high level for continuing professional development
Enquiry	Demonstrate a comprehensive understanding of methodologies and techniques, within engineering.	Demonstrate a comprehensive understanding and critical evaluation of methodologies and techniques, including Information Literacy, applicable to your chosen specialised field.	Demonstrate a comprehensive understanding and critical evaluation of methodologies and techniques, including Information Literacy, applicable to your own specialised field and, where appropriate, propose new hypotheses.
Analysis	Demonstrate a critical awareness and evaluation of current research within engineering.	Demonstrate a critical awareness and evaluation of current research within engineering especially your chosen specialised field.	Demonstrate a critical awareness and evaluation of current research, advanced scholarship, contemporary problems and/or new insights, much of which is at, or informed by, the forefront of engineering.
Problem Solving	Evaluate issues systematically making sound judgements in predictable situations.	Evaluate complex issues systematically, making sound judgements in complex and unpredictable situations.	Evaluate complex issues both systematically and creatively, make sound judgements in the absence of complete data, and employ appropriate decision-making in complex and unpredictable situations.
Communication	Communicate their conclusions clearly to specialist and non-specialist audiences.	Communicate their conclusions clearly to specialist and non-specialist audiences.	Able to evaluate the audience and communicate your conclusions clearly and at an appropriate technical level.
Application	Demonstrate the application of knowledge in engineering.	Demonstrate the application of knowledge in engineering especially your chosen specialised field.	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 knowledge in engineering.
Reflection	Demonstrate the qualities and transferable skills necessary for continued study.	Demonstrate the qualities and transferable skills necessary for independent study and research. Show initiative, personal responsibility, self-direction and originality in tackling and solving problems.	Demonstrate the qualities and transferable skills necessary for employment Show initiative, personal responsibility, self-direction and originality in tackling and solving problems. Act autonomously in planning and implementing tasks at a professional or equivalent level.

Appendix B – Curriculum Maps

Sem	Code	Module Title	CATS	Award CORE (C), OPTION (O) and ADDITIONAL (A) modules							Assessment %	
				EE	EL	TE	MT	ME	AE	AN	Exam	ICA
	ELEC70247	Photovoltaic Technology	15	C	O		O				50	50
	ELEC70287	Digital Electronic Systems	15	C	O	O	O				50	50
	MECH70581	Digital Signal Processing	15	C	O	C	O				50	50
	ELEC70264	Power Electronics in Electric Utility Systems	15		C						50	50
	ELEC70295	Advanced Power System Analysis	15		C						70	30
	MECH70624	Design Technologies for Masters	15				C	C	C		50	50
	MECH70599	Advanced Engine Design	15						C		50	50
	MECH70625	Energy Management	15		O		O	C			50	50
	ELEC70308	Cellular Network Planning Principles	15			C					70	30
	ELEC70309	Voice and Data over Broadband Networks	15			O					50	50
	MECH70379	Advanced Aeronautical Principles	15							C	50	50
	MECH70378	Aircraft Propulsion Systems	15							C	50	50
	COCS70513	Embedded Real Time Systems	15	C	O		C				0	100
	ELEC70272	Telecommunications	15	C	O	C					50	50
	ELEC70288	Optical fibre communication systems	15	O		C					70	30
	ELEC70268	Wireless Navigation Systems	15	O		C					70	30
	ELEC70296	Power System Protection	15		C						50	50
	ELEC70263	Flexible AC Transmission Systems & Custom Power	15		C						50	50
	ELEC70280	Industrial Robotics and Control	15	O	O		O	O		O	50	50
	MECH70577	Advanced Vehicle Aerodynamics	15						C	C	50	50
	MECH70578	Advanced Vehicle Dynamics	15						C		50	50
	MECH70610	Sustainable Design and Manufacture	15				O	O	O		50	50
	MECH70535	Advanced Engineering Materials	15				O	C	O	O	50	50
	ELEC70315	Control Systems	15	C	C	O	C	C	C	C	50	50
	ELEC70325	WSN & IoT: Principles and Practices	15				O				50	50
	MECH70568	Research Methods & Project Management	15	C	C	C	C	C	C	C	0	100
	MECH70647	Structural Integrity	15				O	C	C	C	50	50
	MECH70590	Applied Structural Integrity	15				O	C	O	C	0	100
	COWB70327	Technical Paper Authoring	15	O	O	O	O	O	O	O	0	100
	MECH80543	Industrial Responsibility (EU Employed students only)	15	O	O	O	O	O	O	O	0	100
	ELEC70312 / ELEC70281	MSc Project OR / MSc Project by Distance Learning (EU students only)	60	C	C	C	C	C	C	C	0	100
	MECH70672	Industrial Placement (Engineering Masters)	15	A	A	A	A	A	A	A	0	100

EE= Electronic EL=Electrical TE=Telecoms MT=Mechatronic ME=Mechanical AE=Automotive AN=Aeronautical