

Part-Time Student Handbook 2009/2010 **(Adapted from the Full-Time Student Handbook)**

Part-Time Engineering Programme

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|---|-----------------|
| BEng/BEng(Hons) Automotive Engineering | 10H33000 |
| BEng/BEng(Hons) Electrical Engineering | 10H50100 |
| BEng/BEng(Hons) Electronic Engineering | 10H60100 |
| BEng/BEng(Hons) Mechanical Engineering | 10H30100 |
| BEng/BEng(Hons) Mechatronics | 10H39100 |
| BEng/BEng(Hons) Network Engineering | 10H22100 |

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An electronic version of this Part-Time Awards handbook can be found on www.staffs.ac.uk/fcet

Open Evenings : 13th July, 11th August and 26th August in C221 at the Stafford site. Please contact Maureen Button on 01785 353565 if you wish to attend. Please note that an application form is needed if you want to study on one of our awards. Please see <http://www.staffs.ac.uk/parttimeform/> and send it in on line if you wish. This is the first step to studying on one of our courses.

Module Enrolment: 7th 8th and 9th September 2pm to 8pm in Octagon Building, KC1, Stafford site. You will receive details of on-line Course Enrolment, but attendance at one of these sessions is recommended to choose modules for your Part-Time study.

How to use this handbook

This handbook explains the background, structure, content and operation of the modular undergraduate programmes of study for Engineering Awards. It is essential that you read this handbook fully before you commence your award.

The explanations contained within are designed to be user-friendly and must defer to the University Award Regulations and General Student Regulations. The most up-to-date version of those regulations can always be found at http://www.staffs.ac.uk/images/ugrad_mod_fram_tcm68-12695.pdf

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1 Welcome from the Pro Vice-Chancellor

It is my pleasure to welcome you as a student to the Faculty of Computing Engineering and Technology. You are joining a multidisciplinary community of about 3000 students and over 150 staff, involved in education, research and practice in all areas of Computing Engineering and Advanced Technology. We all hope that you will find your time with us to be enjoyable and productive. An education in any area is a challenging prospect, but developing your creativity, skills and resourcefulness in such a fast changing discipline as technology in this new millennium has many benefits, in vocational practice or many other future careers.

We are committed to creating a productive, efficient and friendly atmosphere within the Faculty and welcome your participation in this, but if you are experiencing problems, the staff are there to help you.

Professor Michael Goodwin
Pro Vice-Chancellor, Dean of the Faculty of Computing Engineering and Technology

2 Sponsorship from your Company to attend Part-Time Study

We understand the difficulty of obtaining release from your company for study one-day-each-week. The major objection is likely to be the loss, to your company, of your time whilst studying at University.

Many companies accept the loss of their employees time for two main reasons:

- They have a commitment to *Investing in People* i.e. *your* self-development.
- They consider that you will be more useful to them because of your enhanced academic and transferable skills development.

If you reach an impasse in negotiations for your day-release then please consider the following:

- You may be able to negotiate time-in-lieu arrangements - coming in a bit early, maybe Saturday morning, etc.
- You may decide to take a proportion of your annual leave to cover some of the 24 days of attendance required for lectures in each year. (Two Teaching Blocks each of 12 days).
- You may decide to work in conjunction with another student or even form a study group to attend say 70% of the time and make good your understanding of the material by evening meetings of your own.
- You may be able to arrange semi-distance learning options with the lecturer. Some lecturers may give you a full-set of notes to cover the module material.
- If you are enrolled with us then you will be able to use the excellent library and professional databases provision at the University and fast Broadband Internet access. These facilities can also be of value to your company, accessed on the basis of your need for study. An example of this might be to research British Standards.

Most part-time students are very successful with their study and we usually see a significantly greater number of part-time students achieving the 1st Class and Upper Second degree classifications compared with the full-time students. Research shows that people with degrees achieve much higher salaries compared with non-degree employees – enrolling on this course of study should be seen as a very important positive step in your personal development. The opportunity to study for a degree is a real life chance not to be missed.

3 The Course Fees

A 15 credit module cost is £225.00 and there are no extra registration fees. Industry type courses can cost in the region of £300 pounds for each day of study and as a comparison normally a **whole year of study** with us will cost about £900.

If it is possible, please request a letter from your company on headed paper, stating that your company can be invoiced for the fees. If you do not do this, an invoice will be sent to your home address.

To be counted as a Part-Time student you must be studying 90 or less credits in any academic year with no more than 60 in any one Teaching Block.

Depending on your income and family circumstances you may be eligible for a student grant. This has recently been modified from the loan scheme used for full time students. For more information please contact the Department of Further Education at:

<http://www.direct.gov.uk/en/EducationAndLearning/AdultLearning/index.htm>

4 The Academic Year

4.1 Enrolment

You will be sent instructions for on-line enrolment for your course and we suggest that this is done soon after you have your offer letter, you can attach a jpeg photo of yourself so that your student card will be waiting for you when you start attending. It is useful to enrol early but if for any reason, you cannot take up your enrolment, you can write to tell us before the course starts and you will not be sent an invoice for fees.

The dates for module enrolment in 2009 are Monday, Tuesday or Wednesday 8th 8th or 9th September, 2pm to 8pm in the Octagon Building, KC1, on the Stafford Site. This confirms the details of your study with us.

Please check www.staffs.ac.uk/fcet in case the enrolment dates are changed.

If you do not attach a jpeg file for your student photograph to the on-line enrolment, please bring one passport sized photograph, with your name on the reverse, when you come to module enrolment. Module enrolment forms will be available to complete.

Three main items to submit:

- A completed module registration form, make sure that you have signed this.
- A letter from your company (if appropriate) indicating that Staffordshire University may invoice them for the fees.
- *Please bring **photocopies** of previous certificates of study with you when you come to the module enrolment and these will be used to confirm the credit we can offer you towards study on the Honours Degree programme.*

Each subsequent year of enrolment, you will be able to complete the course enrolment on-line, but it is useful to attend the module enrolment in person to check your study profile. A letter from your company indicating that we can invoice them for your course fees for that year will also be needed (if you have arranged this).

4.2 Induction

There will be a three-hour induction session on Tuesday 22nd September in D117 on the Beaconside site at Stafford.

This will be scheduled approximately as follows:

| | |
|------------------|---|
| 14.00 to 15.00 : | General presentation on the Awards. Discussion of this Award Handbook. Administrative Procedures. Laboratory work. Grading Systems. University Regulations. |
| 15.00 to 15.15: | Welcoming talk by the Director of Learning & Teaching. |
| 15.15 to 16.00: | Tea with staff in the Gallery restaurant and individual discussions. |
| 16.00 to 16.30: | Library talk and Computer Services talk. |
| 16.30 to 16.45: | Laboratory talk. |
| 17.00 to 18.00. | Industrial General Option Group Modules presentation including PebblePad guidance.. |

4.3 Important guidance relating to changes

4.3.1 Changes in Personal Details

It is very important to inform the School Office of any changes in your personal details. In particular, please write to inform us of the following:

- Change of address
- Change of company
- Change in telephone number(s) If you can be contacted by mobile phone, please include this number on the form.

4.3.2 Changes to Study

If you need to change any of your enrolment details (shown on the Module Registration Form), please make sure that you use the *module amendment form* which is available from the School Office. Once completed, this must be sent to Charles Walker, Award Programme Manager for Part-Time study, FCET, Staffordshire University,

Beaconside, Stafford, ST18 0AD.

Officially, you may not alter your study commitment *after* the first 4 weeks of the Teaching Block but circumstances at work which prevent you from finishing study on a module(s) will always be considered if you are later than this. If you discontinue from a module make sure that you always tell us or your performance will be recorded as a fail. A failed module prevents you from achieving a proper grade or worse than this, a zero in a module may result in you failing the award completely.

4.3.3 Extenuating Circumstances

If there are good reasons why you cannot complete the study that you are enrolled for then it will be necessary to use the Extenuating Circumstances procedure. Collect an Extenuating Circumstances form from the Faculty Office or from the internet http://www.staffs.ac.uk/images/extenuating_cir_tcm68-15855.pdf and make sure that **all** areas of assessment that are affected are clearly identified on the form. Make sure also that Part B is completed and is supported either by a doctor's note or a supporting statement from your company. There is a special committee which considers these applications to make sure that all students are treated fairly. Please be very aware that a **late submission of work** will result in a zero unless Extenuating Circumstances are upheld. **A zero mark will always mean that you fail the module. The deadline date for Teaching Block 1 is Friday 22nd January. The deadline for Teaching Block 2 is Friday 21st May.**

Please note that there are only two attempts allowed on a module and referral opportunities offered to you *must* be used at the first opportunity and cannot be deferred.

4.3.4 Intermission, Withdrawal or Dormant

If you must take a complete break from study, make sure that you complete an **Amendment to Study form** available from the School Office. If you hope to return to study, complete the **intermitting** section rather than the **withdrawal** section as withdrawal means that your records are removed from our student database. If you are choosing to have a year's break to recover some referral modules then this is recorded as *dormant*. Dormant means that you will be entered for assessments but that no new modules are being studied.

4.4 The Academic Calendar

| University | Week | Public Holidays |
|------------|------------|---|
| Week No. | Commencing | Student Activities |
| 8 | 07-Sep-09 | Module Enrolment 2pm-8pm Mon 7th, Tues 8th or Wed 9 th KC1, Octagon, Stafford site (provisional –please see fcet.staffs.ac.uk) |
| 9 | 14-Sep-09 | |
| 10 | 21-Sep-09 | Induction Tuesday 22 nd 2pm-6pm |
| 11 | 28-Sept-09 | Teaching Block 1 Week 1 |
| 12 | 05-Oct-09 | Teaching Block 1 Week 2 |
| 13 | 12-Oct-09 | Teaching Block 1 Week 3 |
| 14 | 19-Oct-09 | Teaching Block 1 Week 4 |
| 15 | 26-Oct-09 | Teaching Block 1 Week 5 |
| 16 | 02-Nov-09 | Teaching Block 1 Week 6 |
| 17 | 09-Nov-09 | Teaching Block 1 Week 7 |
| 18 | 16-Nov-09 | Teaching Block 1 Week 8 |
| 19 | 23-Nov-09 | Teaching Block 1 Week 9 |
| 20 | 30-Nov-09 | Teaching Block 1 Week 10 |
| 21 | 07-Dec-09 | Teaching Block 1 Week 11 |
| 22 | 14-Dec-09 | Teaching Block 1 Week 12 |
| 22 | 21-Dec-09 | Christmas Vacation) |
| 23 | 28-Dec-09 | Christmas Vacation) (3 Weeks) |
| 24 | 04-Jan-10 | Christmas Vacation) |
| 25 | 11-Jan-10 | Exams/Independent Study |
| 26 | 18-Jan-10 | Teaching Block 2 Week 1 |
| 27 | 25-Jan-10 | Teaching Block 2 Week 2 |
| 28 | 01-Feb-10 | Teaching Block 2 Week 3 |
| 29 | 08-Feb-10 | Teaching Block 2 Week 4 |
| 30 | 15-Feb-10 | Teaching Block 2 Week 5 |
| 31 | 22-Feb-10 | Teaching Block 2 Week 6 |
| 32 | 01-Mar-10 | Teaching Block 2 Week 7 |
| 33 | 08-Mar-10 | Teaching Block 2 Week 8 |
| 34 | 15-Mar-10 | Teaching Block 2 Week 9 |
| 35 | 22-Mar-10 | Teaching Block 2 Week 10 |
| 36 | 29-Mar-10 | Easter Vacation |
| 37 | 05-Apr-10 | Easter Vacation |
| 38 | 12-Apr-10 | Teaching Block 2 Week 11 |
| 39 | 19-Apr-10 | Teaching Block 2 Week 12 |
| 40 | 26-Apr-10 | Revision Week |
| 42 | 03-May-10 | Assessment |
| 43 | 10-May-10 | Assessment |
| 44 | 17-May-10 | Assessment |
| 45 | 24-May-10 | Marking/assessment processing |
| 46 | 31-May-10 | Marking/assessment processing |
| 47 | 07-Jun-10 | Marking/assessment processing |
| 48 | 14-Jun-10 | Marking/assessment processing |
| 49 | 21-Jun-10 | Award Boards |
| 50 | 28-Jun-10 | Results published/Counselling |
| 51 | 05-Jul-10 | |
| 52 | 12-Jul-10 | Awards Ceremonies |

Note 1: Please avoid booking your holidays during the assessment periods.

Please note the following

Resit Examinations: These will be scheduled for the last two weeks in August.

Referred Coursework: This is to be submitted during the second half of August – date given after exam boards in June.

4.5 Examination Dates

These will be displayed near to the Administration Centre and all the dates and times are held on the University Website. Please be sure to check this information as it can be subject to changes.

4.6 End of year letter

You will receive postal notification of your achievement in each module, for which you have been enrolled, towards the end of July. This will show the Grade Point for each subject. Please staple these letters to the rear cover of this Award Handbook as they will always be a useful confirmation of your progress on the programme of study.

5 Admission Requirements for the BEng/BEng(Hons) Awards

5.1 Admission with an HNC

A candidate who has completed and achieved a high standard in an appropriate BTEC Higher National Certificate will be considered for direct entry onto Stage 2 (see timetabling details later in this handbook) of the study and also considered for credit against any additional modules that can be accurately matched to your previous study. The Level 2 Business module is often an example of this.

The credit given will normally allow completion of the Honours Award in four years of Part-Time day-release study.

5.2 Admission with an HND

A candidate who has completed and achieved a high standard in an appropriate BTEC Higher National Diploma will normally be allowed direct entry onto Stage 3 (see timetabling details later in this handbook) of the Honours Award and *additionally* be credited with the General Options module and usually the Business module at Level 2. Credit for other Level 2 modules requires completion and acceptance of appropriate pro-forma questionnaire claim forms and these are available from the Faculty Office.

A person entering the award at Level 2 will normally complete the Honours Award in 3 years day-release Part-Time study.

5.3 Admission to Level 3

A candidate who holds a good BEng Degree in a relevant engineering or similar discipline may be admitted to Stage 5 of the appropriate Named Award. The Degree must have been acquired within the three years prior to the application being made but the Award Management Committee may accept additional evidence of appropriate experiential learning to supplement the Degree. A programme of balancing studies, matched to the specific needs of an individual student, may be a necessary requirement to facilitate the successful transfer to Level 3 of the chosen Named Award.

A person entering at Level 3 will normally expect to complete the Honours Award in 2 years of Part-Time day-release study.

5.4 Extra Credit for other Study and Industrial Experience

We will always consider evidence of other study and special industrial experience.

In general, credit given against *previous study* is called Accreditation of Prior Learning (APL) and credit given against *industrial experience* is called Accreditation of Prior Experiential Learning (APEL). Although modules credited in this way are only recorded as a grade point 4 (a bare pass) these modules are discounted for the calculation of your final classification so you are not disadvantaged by these seemingly low gradings.

If you can provide evidence which you believe should be counted specifically against your programme of study, please see the Part-Time Award Programme Manager who will be pleased to help.

Please note: staff time is required to appraise submitted work and an interview may be required. To cover the cost of administering this process, the normal charge of £202 is made for the APEL of a module.

The APL forms and guidance is found at:

http://www.staffs.ac.uk/images/apel_pol_student_hbook_tcm68-12705.pdf

Please use the forms found on pages 12 onwards when applying for AP(E)L.

OVERVIEW AND BACKGROUND TO THE AWARDS

5.5 Introduction to the awards

The programme of awards in this document exists to fulfil the expectations of industry of Engineers and Designers. These expectations have changed significantly in recent times, with the engineering graduate having to operate in a wider marketplace than they did 25 years ago. The abundance of computer software and hardware available to the engineer and designer has altered their job function tremendously. Industry has also taken the role of the engineer and designer and altered it to a multi-disciplinary career spanning physical sciences, mathematics, information technology and management. The awards in this programme have been developed to produce engineers who can operate in, and adapt to, this fast changing environment.

The awards foster the use of IT systems as essential tools, with a strong emphasis on experimentation by simulation. The development of transferable skills including communication and teamworking, of paramount importance in industry today, is strongly emphasised. The awards aim to develop a strong understanding of background knowledge and the context in which to apply and the breadth and depth of technical knowledge particular to each route.

Level one of the programme is common to all named awards, developing your underpinning knowledge and basic skills required for Levels 2, 3 (and 4), where you will develop your more specialist skills and knowledge reflected in your award title. Details of curriculum and structure are covered in detail in later Sections of this document.

5.6 BEng/BEng(Hons) in Electronic Engineering

In the context of these awards 'systems design' is understood to imply a study of the integration of various electronic components to form a workable design of an overall product, and also to include a study of the role of design within a business systems setting. On the other hand in the 'wider engineering' context the emphasis is less on design or on the business system (although it may include these) but will also include substantial aspects of modelling, analysis, manufacturing, and testing of engineering products or processes

Electronic Engineering encompasses the design and application of electronic devices, circuits and systems, signal processing and communications. Applications include a wide range of artefacts and systems, some of which are obvious and familiar such as television, CD players, pc's, cellular telephones and so on, to less obvious applications such as aircraft electronics, radar, the utilities such as gas, and manufacturing and commercial organisations. Electronic Engineering requires the understanding and application of sophisticated principles, techniques and technologies.

This is a broad based electronics course designed to develop knowledge, skills and understanding in these principles, techniques and technologies with modules in analogue, digital and microelectronics as well as computer technology and computing. Fundamentals of signal analysis and communications are also presented and a range of cores modules are offered at level 3 to allow diversification into topics such as signal processing and communication systems as well as advanced electronics.

This award is for people with an interest in 'electronics' in its broadest sense and who wish to develop this interest to a high level of understanding and competence.

This award is designed to prepare you for a wide range of career opportunities in the electronic design, development and application sectors.

5.7 BEng/BEng(Hons) Mechanical Engineering

There is a demand within the engineering industry for mechanical engineers who are able to practice as designers within, or as analysts and operators of, engineering systems. These courses aim to produce graduates who can design products or processes, and who understand the place of design within an engineering system. By emphasising systems design principles and transferable core skills the courses 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.

Mechanical engineers are required to understand and use scientific and technical knowledge, should be able to model engineering systems and predict system behaviour, and should understand manufacturing processes and how they influence design. They are also required to understand business management principles, and the role of the mechanical engineer operating within a system to providing a product or service that meets a demand. The courses focus on key engineering skills and illustrate, through the use of examples and problem-based learning, their application to relevant areas such as product design, process design and system analysis and modelling. A number of key technical skills are developed as threads throughout the three years of the course in order to ensure the correct depth of knowledge within these areas.

Students following the Mechanical Engineering award gain deeper knowledge and improved skills in applying engineering principles to the solution of problems in the wider engineering context

Graduates from these awards are likely to find employment in areas of engineering such as heavy plant design, white goods engineering, control engineering, mechatronics design, manufacturing system management, consulting, and other areas. However it is envisaged that graduates from the course will be sought after as employees not only within the engineering sector, but also in the much wider commercial and IT sectors where fundamental understanding and problem solving skills are required.

5.8 BEng/BEng(Hons) Mechatronics

This award is offered in response to industry's demand for a new breed of professional technologist capable of contributing to the automated environment. The accelerating move toward high technology in industry and commerce means that the traditional demands on the mechanical engineer for analysis and design of components should be enhanced by an ability to devise and implement the supporting systems for complex measurement, data acquisition, and control. Graduates from this named award must be equally confident when faced, for example, with challenges in stress or vibration and interfacing the computer for measurement of the tests. Alternatively, they may be involved in the installation of a computer-controlled energy monitoring system in a large hospital. They will be capable of devising their own reliable and practical solutions in disciplines without recourse to other specialists and will also provide a link to facilitate discussions between the specialist engineers.

To provide this experience, a curriculum has been designed using a mixture of modules from the mechanical and electronic routes. Selection is based on what we consider are the needs of an engineer to work across these boundaries or to specialise as the need arises.

From all of the named awards in the programme, graduates with exceptional abilities may continue their studies for a taught postgraduate MSc degree or onto postgraduate research for an MPhil or PhD degree.

5.9 BEng/BEng(Hons) Electrical Engineering

Specialist modules relating to electrical machines, electric fields, power systems and power electronics allow a distinctive award of Electrical Engineering to be defined. This named route is now quite rare nationally, but the collection of Power Engineering in Staffordshire has justified its inclusion in our programme of awards. It will suit those people involved with for example generator design, power transformer design, protection systems design and HV systems in the distribution industry and the railways as well as those who manage power systems or are involved with utilities design in buildings.

5.10 BEng/BEng(Hons) Network Engineering

Building on Staffordshire University's strong tradition in Telecommunications research we have introduced this new programme of study. Module titles such as LAN's and WAN's, Digital Switching, Advanced Switching, Data Communications Systems and Network Troubleshooting define the unique flavour of this award.

5.11 BEng/BEng(Hons) Automotive Engineering

This award focuses on the mechanical engineering aspects of the automotive field. Students study subjects such as vehicle dynamics, aerodynamics, and engine design as well as gaining a solid underpinning in mechanical engineering principles.

During the first year, students apply mechanical engineering principals to automotive applications allowing you to develop skills that will enable you to analyse complex automotive systems in the second year. At level 3, following a possible sandwich year, you will complete a major project along with specialist modules dealing with engine design, Computational Fluid Dynamics (CFD), and Finite Element Analysis (FEA).

6 Overall structure

6.1 Introduction

In order to qualify for a BEng(Hons) award the Framework requires the accumulation of 360 CATS points. Not less than 120 points are required at Level 3 and not more than 120 points at Level 1. Students normally study the equivalent of 8 x 15 CATS points rated modules at each level. The credit rating of all modules is either 15 CATS points or multiples of 15 CATS points. MEng requires a further 120 points at Level 4.

The Level 1 of study is mostly common to all students, providing a sound basis of knowledge and skills for all awards, and providing added flexibility for the student, who may then opt, if they wish, to switch awards within the programme

As may be expected in an engineering environment where the awards prepare students for eventual Chartered status, the award routes are fairly heavily prescribed.

6.2 Accreditation

All these Honours Degrees have been accredited by the Institution of Engineering and Technology (IET) as meeting the academic requirements to become a Chartered Engineer. We are currently awaiting a visit from IET to renew our accreditation and we will ask that the accreditation will cover all students on these courses.

There is a visit planned for early December to consider our BEng(Hons) Mechanical, Mechatronics and Automotive Engineering courses to be accredited as meeting their requirements to become a member of IMechE .

6.3 Award Profiles and Provisional Timetable details

The full URL for timetabling information is <http://www.staffs.ac.uk/fcetstaffordtimetable>

, see **Module Timetables and Attendance** section to find the timetabling arrangements for a single module. An overview of the content of any module can be found at <http://www.staffs.ac.uk/current/student/modules/>.

Legend to abbreviations used below:

ME = Mechanical Engineering

EE = Electronic Engineering

MT = Mechatronics

NE = Network Engineering

EL = Electrical Engineering

AE = Automotive engineering

CW = coursework %

EX = examination %

C = Core, O = Option, G = General Option. Stage = a year of part-time study.

15/30 = 15 credits of a 30 credit double module

Honours degree study must add up to 360 credits normally comprising 120 credits at each level. Credit for prior learning will be considered.

Entry with an HNC is normally to *Stage 2* of the study and with an HND to *Stage 3*. Additional credit will be discussed when linked to your HNC/HND profile. If you have A levels, and National Certificate or National Diploma or City and Guilds qualifications, normal entry is to Stage 1.

6.3.1 Level 1 Teaching Block 1 (before Christmas)

| Module details Degree Structure | | | | | | | | | Assessment | | Provisional timetable information- see http://www.staffs.ac.uk/fcetstaffordtimetable | | |
|---------------------------------|---------------------------------|--------|----|----|----|----|----|----|------------|------|--|------------------|-------|
| Code | Module title | Credit | ME | EE | MT | NE | EL | AE | CW | Exam | Day | Time | Stage |
| CE00432-1 | Essential Mechanics & Fluids | 15/15 | C | C | C | | C | C | 100 | | Mon | 9-10,12-13,14-15 | 1 |
| CE00431-1 | Essential Electronics | 15/15 | C | C | C | C | C | C | 100 | | Mon | 10-11,15-17 | 1 |
| CE61012-1 | Maths Foundations for Engineers | 15/15 | O | O | O | O | O | O | 100 | | Tues | 9-11,14-15,16-17 | 2 |
| CE61006-1 | Quantitative Methods | 15/15 | O | O | O | O | O | O | 100 | | | | 2 |
| CE00437-1 | Instrumentation & Measurement | 15/15 | C | C | C | C | C | C | 100 | | Tues | 11-13 | 2 |
| CE00129-1 | Operating Systems for Engineers | 15/15 | | | | C | | | 100 | | Mon | 11-13,14-15 | 1 |

6.3.2 Level 1 Teaching Block 2 (after Christmas)

| Module details Degree Structure | | | | | | | | | Assessment | | Provisional timetable information- see http://www.staffs.ac.uk/fcetstaffordtimetable | | |
|---------------------------------|---------------------------------|--------|----|----|----|----|----|----|------------|------|--|------|-------|
| Code | Module title | Credit | ME | EE | MT | NE | EL | AE | CW | Exam | Day | Time | Stage |
| CE00433-1 | Mechanical Principles | 15/15 | C | | C | | | C | 50 | 50 | Mon | TBA | 1 |
| CE00434-1 | Electronic Principles | 15/15 | | C | C | C | C | | 50 | 50 | Mon | TBA | 1 |
| CE00435-1 | Thermodynamics | 15/15 | C | | | | | C | 50 | 50 | Tues | TBA | 2 |
| CE00436-1 | Electrical Principles | 15/15 | | C | | O | C | | 50 | 50 | Tues | TBA | 2 |
| CE00554-1 | Software for Engineers | 15/15 | C | C | C | C | C | C | 100 | | Tues | TBA | 2 |
| CE00430-1 | Design Principles | 15/15 | C | C | C | O | C | | 100 | | Tues | TBA | 2 |
| CE00126-1 | Intro to Networking LANs & WANs | 15/15 | | | | C | | | 100 | | Tues | TBA | 2 |
| CE00563-1 | Automotive Design Principles | 15/15 | | | | | | C | 100 | | Tues | TBA | 2 |

Level 2 Teaching Block 1 (before Christmas)

| Module details Degree Structure | | | | | | | | | Assessment | | Provisional timetable information- see http://www.staffs.ac.uk/fcetstaffordtimetable | | |
|---------------------------------|--------------------------------|--------|----|----|----|----|----|----|------------|------|--|--------------|-------|
| Code | Module title | Credit | ME | EE | MT | NE | EL | AE | CW | Exam | Day | Time | Stage |
| CE00591-2 | Fluid Systems | 15/15 | C | | O | | | | 50 | 50 | Thurs | 16-18, 18-19 | 3 |
| CE00043-2 | Engineering Design Project | 15/15 | C | | O | | | | 50 | 50 | Tues | 14-15,15-17 | 4 |
| CE00604-2 | Digital & Emb'd S/W (RT sys) 1 | 15/15 | | C | O | | C | | 100 | | Thurs | 17-20 | 3 |
| CE00038-2 | Communications | 15/15 | | C | O | C | C | | 50 | 50 | Tues | 9-11,15-18 | 4 |
| CE00039-2 | Signal Processing | 15/15 | | C | O | | C | | 50 | 50 | Tues | 11-13 | 4 |
| CE62013-2 | Engineering Mathematics Apps 1 | 15/15 | C | C | C | C | C | C | 50 | 50 | Thurs | 9-11, 15-16 | 3 |
| CE00042-2 | Engineered Materials | 15/15 | C | | | | | C | 50 | 50 | Thurs | 11-13, 14-15 | 3 |
| CE00881-2 | LAN switching & WAN networks | 15/15 | | | | C | | | 50 | 50 | Tues | TBA | 4 |
| CE00125-2 | Introduction to IP telephony | 15/15 | | | | C | | | 50 | 50 | Thurs | TBA | 3 |
| CE00411-2 | Transport Technology | 15/15 | | | | | | C | 50 | 50 | Tues | TBA | 4 |
| CE00566-2 | Vehicle Aerodynamics 1 | 15/15 | | | | | | C | 50 | 50 | Tues | TBA | 4 |

6.3.3 Level 2 Teaching Block 2 (after Christmas)

| Module details Degree Structure | | | | | | | | | Assessment | | Provisional timetable information- see http://www.staffs.ac.uk/fcetstaffordtimetable | | |
|---------------------------------|-----------------------------------|--------|----|----|----|----|----|----|------------|------|--|------|--------|
| Code | Module title | Credit | ME | EE | MT | NE | EL | AE | CW | Exam | Day | Time | Stage |
| CE00584-2 | Mechanical Systems | 15/15 | C | | O | | | C | 50 | 50 | Thurs | TBA | 3 |
| CE00586-2 | Applications of Control | 15/15 | G | G | C | | C | | 50 | 50 | Tues | TBA | 4 |
| CE62014-2 | Engineering Maths Applications 2 | 15/15 | C | C | C | | C | C | 100 | | Thurs | TBA | 3 |
| BLB10145-2 | Management in Organisations | 15/15 | C | G | C | C | G | G | 50 | 50 | Tues | TBA | 4 |
| CE00864-2 | Intro to Network Security | 15/15 | | | | C | | | 50 | 50 | Tues | TBA | 4 |
| CE00861-2 | Advanced Routing | 15/15 | | | | O | | | 50 | 50 | Thurs | TBA | 3 |
| CE00626-2 | Digital & Emb'd S/W. (RT sys) 2 | 15/15 | | C | O | | G | | 100 | | Thurs | TBA | 3 |
| CE00095-2 | CAM & Rapid Prototyping | 15/15 | G | | G | | | G | 50 | 50 | Tues | TBA | 4 |
| CE62025-2 | Spreadsheets Modelling Techs. | 15/15 | G | G | G | G | G | G | 100 | | | TBA | 4 |
| CE00097-2 | Industrial Technical Skills | 15/15 | G | G | G | G | G | G | 100 | | Industry | | 2 or 3 |
| CE00132-2 | Electrical Power and Machines | 15/15 | | G | G | | C | | 50 | 50 | Tues | TBA | 4 |
| CE00564-2 | Engine Design 1 | 15/15 | | | | | | C | 50 | 50 | Tues | TBA | 4 |
| CE00096-2 | Crash Investigation & Measurement | 15/15 | G | | | | | G | 100 | | Tues | TBA | 4 |
| CE00131-2 | Environmental Impact | 15/15 | G | G | G | G | G | G | 50 | 50 | Tues | TBA | 4 |

6.3.4 Level 3 Teaching Block 1 (before Christmas)

| Module details Degree Structure | | | | | | | | | Assessment | | Provisional timetable information- see http://www.staffs.ac.uk/fcetstaffordtimetable | | |
|---------------------------------|--------------------------------|--------|----|----|----|----|----|----|------------|------|--|-------------|--------|
| Code | Module title | Credit | ME | EE | MT | NE | EL | AE | CW | Exam | Day | Time | Stage |
| CE00627-3 | The Professional Engineer | 15/15 | C | C | C | C | C | C | 100 | | Dist or Thur | TBA | 5 |
| CE00048-3 | Systems Engineering | 15/15 | | | C | | | | 100 | | Thurs or Dist | 9-11 | 4 or 5 |
| CE00049-3 | Stress Analysis | 15/15 | C | | O | | | C | 30 | 70 | Thurs | 11-13 | 5 |
| CE00050-3 | Powerplant | 15/15 | C | | | | O | | 30 | 70 | Thurs | 16-18 | 5 |
| CE00051-3 | Analogue and RF | 15/15 | | O | | | O | | 30 | 70 | Thurs | 11-13,14-17 | 5 |
| CE00052-3 | Real-Time Embedded Systems | 15/15 | | O | O | | O | | 100 | | Thurs | 13-16 | 5 |
| CE00602-3 | Power Systems Eng & Analysis 1 | 15/15 | | | O | | C | | 30 | 70 | Tues | 15-18 | 4 |
| CE00055-3 | Power Electronics | 15/15 | | O | | | C | | 30 | 70 | Thurs | 9-11,13-14 | 5 |
| CE00099-3 | Clean Technology | 15/15 | O | | O | | | | 30 | 70 | Thurs | 14-16 | 5 |
| CE00057-3 | Digital Systems | 15/15 | | O | O | | O | | 30 | 70 | Tues | 13-15 | 4 |
| CE00862-3 | Advanced Switching | 15/15 | | | | C | | | 30 | 70 | Thurs | TBA | 5 |
| CE00860-3 | Adv Wireless Networking | 15/15 | | | | C | | | 30 | 70 | Thurs | TBA | 5 |
| CE00058-3 | Industrial Responsibility | 15/15 | O | O | O | O | O | | 100 | | In industry | | 4 |
| CE00568-3 | Vehicle Dynamics | 15/15 | | | | | | C | 100 | | Tues | TBA | 4 |
| CE00565-3 | Engine Design 2 | 15/15 | | | | | | C | 50 | 50 | | | 5 |
| CE00720-3 | Multimedia systems | 15/15 | | | | O | | | 100 | | | | 5 |
| CE74024-3 | Personal Broadband Networks | 15/15 | | | | O | | | 30 | 70 | | | 5 |

6.3.5 Level 3 Teaching Block 2 (after Christmas)

| Module details Degree Structure | | | | | | | | | Assessment | | Provisional timetable information- see http://www.staffs.ac.uk/fcetstaffordtimetable | | |
|---------------------------------|--------------------------------|--------|----|----|----|----|----|----|------------|------|--|-------------|--------|
| Code | Module title | Credit | ME | EE | MT | NE | EL | AE | CW | Exam | Day | Time | Stage |
| CE00629-3 | BEng Project | 30/30 | C | C | C | C | C | C | 100 | 0 | | In industry | 5 |
| CE00036-3 | Data Communication Systems | 15/15 | | C | O | G | | | 30 | 70 | Thurs | TBA | 5 |
| CE00060-3 | Vibration Analysis | 15/15 | C | | O | | | C | 30 | 70 | Thurs | TBA | 5 |
| CE00603-3 | Power Systems Eng & Analysis 2 | 15/15 | | | O | | C | | 30 | 70 | Tues | TBA | 4 |
| CE00865-3 | Network Service Quality | 15/15 | | | | C | | | 50 | 50 | Thurs | TBA | 5 |
| CE00108-3 | Energy Management | 15/15 | G | G | G | G | G | G | 30 | 70 | Thurs | TBA | 5 |
| CE00062-3 | VLSI Design | 15/15 | | G | | | | | 30 | 70 | | TBA | 5 |
| CE00063-3 | DSP | 15/15 | | G | | | | | 30 | 70 | Thurs | TBA | 5 |
| CE00134-3 | Sound and Noise Control | 15/15 | G | G | G | G | G | G | 30 | 70 | Tues or Thurs | TBA | 4 or 5 |
| CE00058-3 | Industrial Responsibility | 15/15 | G | G | G | G | G | G | 100 | | | In industry | 4 |
| CE00974-3 | Vehicle Aerodynamics | 15/15 | | | | | | G | 50 | 50 | | | 5 |

7 Achievement and Qualifications

For full details of all aspects of Staffordshire University conferment of degree classifications, please see http://www.staffs.ac.uk/images/ugrad_mod_fram_tcm68-12695.pdf. The summary below should only be used as a broad guide.

7.1 Certificate in Higher Education

If you achieve 120 credits at level 1 or higher, you will be eligible for a Certificate in Higher Education (Cert HE). This qualification replaces the BTEC Higher National Certificate previously offered by Staffordshire University.

7.2 Diploma in Higher Education

If you achieve 240 credits including at least 120 at level 2 or higher, you will be eligible for a Diploma in Higher Education (Dip HE). This qualification replaces the BTEC Higher National Diploma previously offered by Staffordshire University.

7.3 BEng(non Honours) Degree

You can be awarded a non-honours BEng degree when you have successfully completed 120 credits at level 1, 120 credits at level 2 and **60 credits at level 3**. You can continue to complete the remaining 60 level 3 credits to achieve an Honours Degree, provided that the total time to complete level 3 of the award does not exceed 4 years.

7.4 BEng(Hons) Classification

In order to be considered for the award of a BEng(Hons) candidates must have obtained 360 credit points. These must consist of credits gained for satisfactory completion of the modules defined as comprising the award and must contain normally 120 points at Level 3 and not more than 120 at Level 1. Your award classification is based on your overall score at level 2 and level 3.

7.5 Pass Degree

The Award Board may, at its discretion, decide to offer you a Pass Degree if: you have successfully completed (i.e. been awarded at least Grade Point 4/Pass) 300 credits, of which at least 60 are at Level 3, **and** you have attempted (i.e. been awarded at least Grade Point 1) 360 credits, of which 120 are at Level 3 and no more than 120 are at Level 1.

8 How do you learn?

We use a combination of teaching methods on the awards. Some of the modules are delivered through lectures, laboratories and seminars. These are given by a specialist tutors in the appropriate academic field. Other modules are more open ended in the learning outcomes and involve teams of tutors in the delivery. The emphasis is on the student learning experience, the achievement of which is a primary aim of the course and is, of course a two-way process. An essential part of this learning process is seen to be the development of your interpersonal and communication skills. To this end project work and teamwork are central to the learning experience. This is in line with the University's Building a Learning Community (BLC) strategy. All modules have an element of student centred learning associated with them - this learning undertaken by the student outside normal class contact time. It is essential that you take this aspect of learning seriously, and dedicate a sufficient amount of your time to it, if you are to succeed on the course.

9 What will you learn?

An essential part of the overall learning outcome is that you have the knowledge, skills and understanding to develop as an independent learner, able to apply and keep pace with emerging technologies and processes throughout your career.

The content of your chosen award can be subdivided into

**Mathematics,
Science,
Information Technology,
Design,
Business and Engineering Practice**

The modules you study will develop your knowledge and practical skills in each of these elements. These are the key elements required to be present and to be developed and assessed in all engineering awards. Most of the modules you take as part of your award will contain several of these elements. By the time you reach level 3, your final project will almost certainly contain all of these elements. For more information on these areas, refer to Appendix ii which is an extract from the Quality Assurance Agency Benchmark guidelines for Engineering Awards.

As well as providing knowledge, intellectual ability and practical skills, the course of study develops **your transferable skills** - these are skills that can be applied to any occupation or working environment, thereby making you more employable and self-reliant. As the technology changes you must be able to adapt and take on new ideas and ways of working. These skills can be summarised as:

- Interpersonal, written and oral communication skills
- self, project and team management skills
- research and investigation skills
- critical and analytical skills
- creative problem solving skills
- negotiation skills

Many of these will be developed in the context of **teamwork**, an important area of your engineering award and of your developing career.

10 Award Outcomes

As you progress through your award it is natural that you will become both deeper and broader in your range of skills and knowledge. There is an accepted standard of "*what you know and what you can do*" on completion of each stage. Your award is designed in terms of these *outcomes*; to ensure that your award matches up to national standards for Bachelors or Masters Degrees, it has been designed to conform to the QAA National Qualification Framework (NQF) guidelines; <http://www.qaa.ac.uk> as follows:-

10.1 Level 1 outcomes

By the conclusion of Teaching Block 1 we will expect you to demonstrate an awareness of the broad range of fundamental principles. At the end of Teaching Block 2 we will expect you to have an awareness and understanding of the methods and techniques applicable and to have developed the analytical skills to assess and to express ideas. By now you should be acquiring knowledge to develop as an independent learner and be conversant with fundamental principles relevant to each award.

You will be able to demonstrate

- 1) knowledge of the underlying concepts and principles associated with your area(s) of study, and an ability to evaluate and interpret these within the context of that area of study;
- 2) an ability to present, evaluate, and interpret qualitative and quantitative data, to develop lines of argument and make sound judgements in accordance with basic theories and concepts of your subject(s) of study.

and will be able to:

- a) evaluate the appropriateness of different approaches to solving problems related to your area(s) of study and/or work;
- b) communicate the results of your study/work accurately and reliably, and with structured and coherent arguments;
- c) undertake further training and develop new skills within a structured and managed environment;

and will have:

d) qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility.

10.2 Level 2 Outcomes

By the end of Teaching Block 3 we will expect you to be demonstrating the development of competence in applying a high level of knowledge and skills to problem solving. By the end of Teaching Block 4 you should have achieved an understanding of the principles, techniques and technology applicable and relevant to your award and be prepared to make a useful contribution in 'industry' on an industrial placement, should you take one.

You will be able to demonstrate:

- 1) knowledge and critical understanding of the well-established principles of your area(s) of study, and of the way in which those principles have developed;
- 2) ability to apply underlying concepts and principles outside the context in which they were first studied, including, where appropriate, the application of those principles in an employment context;
- 3) knowledge of the main methods of enquiry in your subject(s), and ability to evaluate critically the appropriateness of different approaches to solving problems in the field of study;
- 4) an understanding of the limits of your knowledge, and how this influences analyses and interpretations based on that knowledge.

and be able to:

- a) use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis;
- b) effectively communicate information, arguments, and analysis, in a variety of forms, to specialist and non-specialist audiences, and deploy key techniques of the discipline effectively;
- c) undertake further training, develop existing skills, and acquire new competences that will enable them to assume significant responsibility within organisations;

and will have:

- d) qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and decision-making.

10.3 Level 3 Outcomes

At this level we will expect you to reflect aims and objectives of the relevant BEng(Hons) award. Where necessary you should now be able to use simulation and analytical skills and knowledge as a means of evaluating applications and design solutions. You will have the capacity to communicate ideas in an articulate and imaginative manner, using a range of presentational methods and media. Through the research, synthesis, writing and presentation of an in-depth design or research report you will demonstrate understanding and the application of intellectual rigour.

You will be able to demonstrate:-

- 1) a systematic understanding of key aspects of your field of study, including acquisition of coherent and detailed knowledge, at least some of which is at or informed by, the forefront of defined aspects of a discipline;
- 2) an ability to deploy accurately established techniques of analysis and enquiry within a discipline;
- 3) conceptual understanding that enables the student:
to devise and sustain arguments, and/or to solve problems, using ideas and techniques, some of which are at the forefront of a discipline; and
to describe and comment upon particular aspects of current research, or equivalent advanced scholarship, in the discipline;
- 4) an appreciation of the uncertainty, ambiguity and limits of knowledge;
- 5) the ability to manage your own learning, and to make use of scholarly reviews and primary sources (eg refereed research articles and/or original materials appropriate to the discipline).

and will be able to:

- a) apply the methods and techniques that you have learned to review, consolidate, extend and apply your knowledge and understanding, and to initiate and carry out projects;
- b) critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete), to make judgements, and to frame appropriate questions to achieve a solution - or identify a range of solutions - to a problem;
- c) communicate information, ideas, problems, and solutions to both specialist and non-specialist audiences;

and will have:

d) qualities and transferable skills necessary for employment requiring:
the exercise of initiative and personal responsibility;
decision-making in complex and unpredictable contexts; and the learning ability needed to undertake
appropriate further training of a professional or equivalent nature.

11 TEACHING AND LEARNING

11.1 Contact hours v Student centred activities

The undergraduate modular framework specifies 120 CATS points at each of the levels, 1, 2, 3 and 4. Typical modules are 15 CATS points rated and are specified as being 150 hours **total** student learning of which up to 40 hours is timetabled **contact hours** including laboratory based work if appropriate.

The remaining 110 hours is defined as **student centred** and students are expected to use this time to consolidate material delivered in lectures, to read around the topics covered, to work on any directed learning or tutorials given and to work on assignments.

As a guideline figure, students are expected to work about 3 hours per module per week in addition to the timetabled class contact hours. It is essential that you treat this requirement seriously, that you manage your time effectively in order to gain maximum benefit from it. If you do not allocate sufficient time to this aspect of your learning, it is unlikely that you will be successful with your studies.

This work is unsupervised and the student will choose the location for such work. Where such work is carried out in laboratories, for example project work, this is done by arrangement with the laboratory technician who would be present for reasons of safety. Students are introduced to the Library and Information Services and Information Technology Services during their induction week. Students are encouraged to make full use of these facilities as part of their private study time.

11.2 Lectures

Lectures will involve a lecturer presenting information to you. Arrive on time and make sure that you have sufficient paper and pens with you so that you can make notes. It does help if you keep a folder for each subject area, so that you can keep all the lecture material for one subject in one place.

It is most important that you can identify the main concepts which are introduced within the lecture. Do not attempt to write down everything that is said, listen to what is said and write down the key points. You can then build up your own understanding of the lecture within your study time by reading about the subject area, relating the topics introduced within the lecture to those introduced previously, and writing more complete notes.

One of the most important aspects of a good lecture technique is to recognise the structure of what is being said and to try to reflect that structure in your own notes, though it is also worth trying to get some idea about the purpose and objectives of the lecture. These two skills are very important in Higher Education, as you must remember that Higher Education is certainly not simply about the acquisition of sets of facts. It is about the development of intellectual skills which will enable you to use your gathered facts usefully and innovatively.

In the pursuit of such skills it is useful to discuss a lecture with your peers, but it is essential that you supplement your lecture notes with private study.

Below are some useful pointers in obtaining the most information from a lecture:

- arrive prepared, having reviewed the previous lecture's content
- keep up to date with all the background reading
- listen to what is being said and think about how it relates to your current understanding of the subject
- take short and clear notes, always thinking about what is being said throughout the lecture
- after the lecture spend time understanding the content of the lecture and make more complete notes

It is not necessarily the function of lectures to provide large amounts of detailed facts. In many cases this can only be done by yourself, making use of the books on the reading list, journals or papers to which you are referred and hand-outs which you may be given. The lectures will help you to structure the subject and to understand its main points.

The Blackboard Virtual Learning environment also provides very useful support material for your learning.

11.3 Tutorials

Tutorials are normally group-based and so you will get to know most of the people in your group quite well. The aim of a tutorial is to clarify your understanding of the lecture material. This is the main time when you ask

questions about the lecture material and discuss the material with your colleagues and a member of staff who is a member of the subject teaching team. Frequently, to aid your understanding, tutorial work will have been set or reading will have been given. It helps if you arrive at the tutorial having attempted the task and then in the tutorial you can sort out any misunderstandings that you may have. You should always remember that you should try to attend every tutorial for several reasons:

- this is the time when you can obtain individual help
- be prepared to state your views about the subject area
- ask questions
- be prepared to take the initiative for discussion. Tutorials should not develop into mini lectures
- be prepared for the tutorial by ensuring that you have attempted any tutorial work and have brought this work and also the lecture material with you

At first, everyone is afraid of admitting that they do not understand how to tackle a particular problem. So speak up and ask questions. You may be doing everyone else a favour by raising a point. Successful tutorials are fun and valuable. They allow you to develop many interpersonal skills. Make the most of them.

11.4 Virtual Learning Environments

FCET is strongly committed to delivering suitable modules in innovative and flexible ways. A number of your modules may be partly or wholly delivered in a virtual learning environment- lecture notes, tutorial work, discussions, documentation and even assessment may be undertaken in *Blackboard* or similar environments. Access to the material is via secure website and thus may be done from University facilities or from home, often at a time of your choosing.

11.5 Practical Laboratory Work

You will often be expected to undertake practical work using laboratory facilities. Some of this work will be assessed. It is important that you keep up-to-date with your practical work. This type of work will often reinforce the material which has been presented within the lecture. Your practical skills will be important when you start your first job. Many of the tasks with which you will be presented, such as learning to use a piece of software, can only be learned by practice.

11.6 Presentations

Some assessments will involve giving a presentation of your work, either individually or as a member of a small group. Giving a successful presentation is a "life skill" which will be vital for you to acquire if you are going to be effective in a variety of careers. As well as being an important form of communication, giving a presentation makes you highly visible and it is an opportunity for you to "sell yourself".

It is important that you establish the purpose of the presentation, the length of the presentation and plan the presentation carefully. Establish which presentation aids will be available to you. There are number of different types of presentation aids for example, overhead projector, slides, video, flip charts and whiteboards. Remember that these aids are there to help you to communicate with the audience. No visual aid can assist you if you have missed the purpose of the presentation or the identity of the audience.

Plan the presentation carefully, ensuring that you cover all the relevant points within the allocated time. Try to allocate time at the end of the presentation to summarise the important issues and to give your audience the opportunity to ask any questions (if applicable).

Remember that you will be standing in front of an audience. It is important that you gain their confidence as soon as possible. This means that style of dress is important.

The following checklist can be used as a guide for when you have to stand up in front of an audience and present material.

- Did the talk have a title and was it made clear at the start how much of the subject would be covered?
- Was the introduction sufficient to enable the listener to follow the theme of the talk?
- Did the speaker try to create an interest in his/her subject?
- Was enthusiasm for the subject displayed?
- Was the material presented well or badly?
- Was material arranged in a logical sequence or was it disjointed?
- Did the speaker show knowledge of the subject?

- Did the talk show evidence of research?
- Did the talk have a beginning, middle and an end ?
- Was the speaker fluent?
- Was the overall pace too fast or too slow?
- Was there a variety of intonation and style?
- Were there any distracting mannerisms?
- Did the speaker try to display confidence?
- Did the speaker try to establish eye contact with the audience?
- Did the speaker attempt to use any visual aids?
- Was the speaker capable of confidently handling questions from members of the audience?

11.7 Reports

The commission and production of reports play a crucial part in achieving the aims which organisations set themselves. The more important decisions become, the more it is likely that specialist reports will be required by decision makers to ensure that the process of decision making is informed and impartial. Whilst studying on your award, you will be required to produce several reports of various types.

A report may contain information that is obtained from a variety of sources, such as experiments, tests, direct observation, questionnaires or interviews. A report should not contain personal opinions which are not supported by any type of evidence. A good report should interest the reader.

Before writing a report, it is important to ask yourself:

- Who will read the report?
- How long should it be?
- What is the purpose of the report?

The answers to the above will provide information about the type of language to be used in the report; that is, technical or everyday terms, and the structure of the report.

The format of written reports varies considerably and the choice of format for a report is very important.

You should list the contents of the report and organise them to suit the audience.

Before you start writing any report it is important that you recognise and remember that a long report is not necessarily a good report. A good report presents the material in a well-structured and concise manner.

You must pay attention to the details of the report such as:

- consistent page numbering
- an accurate table of contents
- consistent style- typeface, font, alignment etc.
- correct and reputable referenced sources

Many reports contain an executive or management summary at an early stage in order to enable the reader to read the main conclusion or meaning of the report early on without the necessity of reading all the report. A synopsis or abstract often substitutes for this for similar reasons and also for easy reference in libraries and abstracts.

11.8 Working in a Group

Much of your professional life will probably be spent working as a member of a team. So whilst you are studying you can expect, as part of your development, to undertake group work. Working as a member of a group is rarely easy. Sometimes the people in the group simply do not like each other. There may be members of your group who seem to do little work. People do possess different strengths and weaknesses. It is up to you to deal with these situations. It is important that all the members of the group have a clear understanding of the group's purpose. Make sure that your role within the group is well understood and the expected outcomes of your work are documented. Ensure that you fulfil your role in the group to the best of your ability. Remember that staff have plenty of experience in managing and assessing group work and that most module assessments where group work is used will employ a scheme to apportion the marks according to the amount of work which each group member has done.

11.9 Meetings

You will be involved in many types of meeting whilst you are a student. For example meetings will form a fundamental part of your group work experience. It is important that you realise that meetings are costly exercises; the cost of the time taken by those who attend the meetings. Several key points will help you to organise and chair successful meetings:

- have a clear, well structured agenda
- set a time limit for the meeting, meetings lasting more than one hour often cease to be productive
- plan the meeting, allocating time slots for each item
- ensure that the actions which arise from the meeting are clear and are assigned to appropriate persons
- ensure that the meeting is minuted (ie a written record is kept)
- ensure that the names of the people present at the meeting are noted
- ensure that the minutes are available before the next meeting so that people can prepare for the meeting and can also report on the actions.

11.10 Investigations and Research

The most important aspects of your education as a student are not the facts that you learn, but the learning process itself. Facts quickly become outdated. As a professional you will have to keep up-to-date with new tools and techniques. You should make regular visits to the library, not only to read the recommended module texts but also related texts and journals. Find out what is currently happening within a particular field. Investigate the new theories and practices.

11.11 Level 3 and Level 4 projects

Project work contributes 45 CATS points at Level 3 of the BEng(Hons) awards and 60 CATS points at level 4 of the MEng awards. Fuller details are available in the Project Handbook, available from the Faculty of Computing, Engineering and Advanced Technology Website. This is a major piece of individual investigative work involving planning, literature survey, practical and simulated experimentation, and detailed analysis. Assessment is based on a range of interim progress reports, a final project dissertation, and oral presentations. The project is intended to combine, develop and assess the range of your subject-specific and transferable skills.

In the case of BEng(Hons) awards it is an additional requirement that the 120 credits at Level 3 must include those awarded for the satisfactory completion of the project module. A minimum Grade Point of 4 is required.

For level 3 projects, students are normally allocated 1 day or 2 half days per week.

12 ATTENDANCE AND EXTENUATING CIRCUMSTANCES

12.1 Attendance

You should aim to attend all teaching sessions for the modules for which you have enrolled. Sessions include all tutor-led activities such as lectures, seminars, tutorials and laboratory. "Sessions" should not be interpreted as "weeks". For small group sessions (sessions which involve a sub-set of the whole module cohort) you must attend the sessions to which you have been assigned. As a protection to you, you may be withdrawn from a module if you miss more than 4 consecutive sessions – please make sure that you inform the lecture or illness or necessary absences because of work commitments.

If your absence/illness affects any aspect of your assessment you may be eligible to submit a claim for extenuating circumstances. For further details of this you should read the section on Extenuating Circumstances in this Handbook

12.2 Extenuating Circumstances

Note that the following information is provided for **guidance only**. You should **always** refer to the current University Regulations for precise details. These regulations can be found at:

http://www.staffs.ac.uk/images/extenuating_cir_tcm68-15855.pdf

If for any valid reason (for example, medical problems), you are unable to submit a piece of work, you must inform your Award Leader. Similarly, if you have any problems which may have a detrimental affect on your work or you cannot attend an in-course test or examination then, again, you should inform your Level Leader as soon as possible. You should also complete an **Extenuating Circumstances Form** available from the

Faculty Office or from the web address above, and also provide supporting documentary evidence (for example, a medical certificate), where appropriate.

12.3 ASSESSMENT

12.3.1 How are you assessed?

You are assessed separately for each module that you undertake. The assessments may be in the form of project solutions, in-class assignments, practical assignments, reports, group presentations, individual presentations, research proposals or in-course tests or formal end examinations. The specific assessment criteria, against which your performance will be evaluated will be explained and given to you by the tutor responsible for that module.

The assessment of your work fulfils two functions and is considered to be an important part of your learning process. The assessment is first of all used to inform you of your academic progress through your route and secondly to assist you in the development of the effective qualities looked for by today's employers.

12.3.2 Overview of coursework

Laboratory based work and other coursework form an integral part of the teaching and learning strategy for the modules on the award. Such assignments are designed to be formative in consolidating material delivered in lectures, and in developing independent learning skills. The majority of assignments form part or the whole of the assessment for the specific modules in which they are set, although additional, non-assessed coursework is set.

Staff are fully aware of the possibility of plagiarism and rigorous school procedures, including viva voce examinations and formal investigations are in place where this is suspected.

Penalties for late submission for coursework are defined in university regulations and are included in this handbook and all students are made aware of these issues.

The Faculty of Computing, Engineering and Advanced Technology imposes a minimum of grade 2 (20%) in each element of assessment (examination and coursework) with a minimum aggregate of grade 4 (40%) to pass.

Assignments are generally prescriptive at level 1, progressing to more open-ended tasks at level 3.

12.3.3 Method of assessment

The weightings for different assessment methods are specified on the module specification form. For assessment, a module specification form may state either laboratory based assignments, or written coursework assignments, or a combination of both depending on the modes and proportions of assessment specified. These methods and weightings are carefully considered in the context of the material to be covered and the delivery method and are subject to external examiners scrutiny and rigorous School and University validation procedures.

Are there common assessment criteria?

In addition to the specific assessment criteria relevant to each module, some or all of the following criteria will also be used.

In your work we will look for evidence of the ability to select, apply and extend your knowledge. At different times your solutions must exhibit appropriate considerations of originality, analysis and implementation. We will expect to see you develop as an independent learner as you progress through each level of the award. You must demonstrate skills in the communication and presentation of research and design solutions and an ability to research and to discover relevant information. We will expect you to be able to apply clear, analytical thinking with regard to both practical work and written assignments.

The above list may appear to be pretty daunting! Don't worry. We will expect you to develop over the three years all the skills and abilities necessary to meet these different criteria. At each level of your studies you are expected to achieve a degree of attainment that is appropriate to that level.

12.3.4 Assessment grades

When your performance on a module is evaluated it will be given a grade, i.e. a number between 0 to 15 and this grade will eventually be printed on your transcript against the module you have enrolled on.

Where you are required to present more than one piece of work for assessment, eg. two written assignments, each assignment is marked separately. Usually it will be necessary for you to achieve at least the minimum pass mark in each assignment in order to pass the module and to gain the necessary credits.

The fifteen-point scale corresponds to the following levels of achievement:

| Grade Points | Performance | Levels 1, 2 & 3 (Associated Honours Classification) |
|-------------------------|--|--|
| 15 14 13 | Outstanding | First Class |
| 12 11 10 | Above average | Second Class Upper Division (2i) |
| 9 8 7 | average | Second Class Lower Division (2ii) |
| 6 5 4 | Satisfactory | Third Class |
| 3 2 | Compensatable Fail | |
| 1 | Non Compensatable Fail | |
| 0 | Non-Attendance or Non-Submission Fail | |

12.3.5 How do I know when work is due?

Assignment work set for assessment will be required during the Teaching Block. The module tutor will notify you of hand-in dates for such work. Work must be handed into the School office where your submission will be recorded. The Faculty of Computing, Engineering and Technology Handbook gives information on hand-in procedures.

12.3.6 Submission and Late Submission of Course Work

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 may result in failure of the module overall. The submission date will be specified for each piece of assessment for each module. It is your responsibility to make sure you know when your submission dates are and to comply with them. Failure to meet this deadline will be treated as a non-submission and your work will not be marked. University staff will not accept any submissions after this. Failure to submit your work within this time will be treated as non-submission.

The only exceptions to these rules apply where a valid claim for extenuating circumstances can be made. For further details you should read section 13.2 on Extenuating Circumstances in this Handbook.

12.3.7 Is there an assessment feedback process?

The University Undergraduate Awards grading system provides very useful end-of-year feedback but for individual assignments, there is special assignment submission front sheet which should be used. When the work has been marked, staff will add comments onto the front sheet and a copy of this will be available for collection from the Faculty office.

12.3.8 What happens if you are unsuccessful?

It is University policy that if you fail either all or part of the assessment for a module, you have the right to be reassessed on one subsequent occasion within the period of two calendar years, at the discretion of the Faculty of Computing, Engineering and Technology Award Board. The maximum grade you can then gain will be a pass (Grade 4) in that module.

Referrals normally take the form of submission of extra work, rework or resit examination papers.

Further details are given in the University regulations, including your right to appeal against decisions which you believe to have been unfairly reached.

12.4 Cheating and Plagiarism

All cases will be dealt with in accordance with current University regulations. A useful guide to help you avoid plagiarism whilst still using and learning from sources of information available from the Net is referenced below:

http://www.staffs.ac.uk/personal/engineering_and_technology/dh5/student%20guide%20to%20plagiarism.doc

Cheating is defined as any deliberate attempt to gain an unfair advantage in any assessment. *Plagiarism* is defined as any deliberate attempt by a candidate to pass off as his or her own work, for the purposes of assessment, the work of another person, including another candidate and including work in computerised form.

Where it has been established that a candidate has engaged in cheating or plagiarism in an examination or other assessment, the Award Board may deem that the candidate has failed all or part of the assessment concerned.

12.5 Appeals procedure

Any appeal against assessment results shall be dealt with in accordance with the appeals procedures of the University.

ADVANCED ADMISSION, ACCREDITATION OF PRIOR (EXPERIENCE AND) LEARNING, PROGRESSION AND ACHIEVEMENT

Advanced Admission refers to entering the award at levels above Level 1. If you have other post-18 qualifications or have studied elsewhere, it is possible that you may be able to enter at Level 2 or exceptionally Level 3

It may be that part of your previous study or even relevant industrial experience can be counted towards your award here (Accreditation of Prior [experience and] Learning).

As you move through the award and up through the levels you *progress*. Finally the level of award and (where appropriate its classification) is your *achievement*

13 AWARD MANAGEMENT

13.1 Who runs the award?

Management of the Award within a programme is the responsibility of the Award Manager who is responsible to the Associate Dean for the Faculty of Computing, Engineering and Technology.

Charles Walker is the current Award Programme Manager for Part-Time study email c.e.walker@staffs.ac.uk
Telephone: 01785 353281.

Peter Barnes is the current Award Programme Manager for the Full-Time routes.

13.2 Module Tutors

A Module Tutor is one of the team of people involved with a particular module. In conjunction with this team, each Module Tutor is responsible for managing and overseeing the day-to-day administration of the module. This involves:

- preparing assessments
- monitoring, controlling and reporting on students' progress
- conducting module reviews with the students of each cohort.

Each Module Tutor provides counselling to students on the module. This may involve:

- encouraging and advising you before you start the module study period
- acting as a focus for problems encountered during the module study period
- providing support and encouragement prior to and during the module assessments.

If you are experiencing any difficulties with the work associated with a module, please see the Module Tutor and discuss the problems.

13.3 What role do students play in award management?

Student views are extremely important: they represent a key feature in determining how well the programme is running and in what direction it should take in future. Your student group has representation on the Award Management Committee, Staff/Students Liaison Committee and on other committees in the Faculty of

Computing, Engineering and Technology. At the start of your award you will elect representatives for these committees. Students of this Award have representatives at each level on appropriate Committees but for Part-Time students, it is usually effective and convenient to direct comment to the Award Programme Manager, who will represent you at the Committee meeting.

13.4 Personal Tutor

On enrolment you will be allocated a Personal Tutor. Your Personal Tutor remains with you as a mentor, guide and confidant throughout your studies with us. We will organise general times for staff and students to meet but you should try to keep in touch with your tutor on a regular basis.

14 STAFFING AND RESOURCES

14.1 University Services and Resources

Staffordshire University has services for Accommodation, Media and Welfare amongst others. Of particular relevance to this award are;

14.2 Information Technology Services

IT Services at the Stafford Campus is situated on the ground floor of the Octagon. At the Stoke Campus IT services is located on the first floor of the Brindley Building and the first floor of the Cadman Building. The purpose of IT Services is to provide an IT support service during your time as a student. Typical services which staff from IT Services provide are:

- providing software documentation
- providing software manuals for you to borrow
- providing Expert Help and advice from Help desk staff
- Laser printing (including colour)
- selling computer consumables such as disks, mouse mats and assignment folders.

IT Services can help you get started and solve most computing problems. Staff are available to give you advice, hand out documentation and lend computer manuals.

In addition, assignment folders and past examination papers can be purchased from the IT Services help desk.

For current conditions of use, IT regulations, opening times of facilities, IT FAQ's (frequently asked questions) etc. the most up-to-date information is held in the IT Services website

<http://www.staffs.ac.uk/uniservices/infoservices/>

14.3 Library and Information Services

The Library and Information Service provides a comprehensive service to students, staff and researchers through five site libraries. The facilities include catalogue access via web and CD-ROM.

<http://library.staffs.ac.uk/#focus>

14.4 The Careers Service

The Careers Service provide a careers advisory and information service to all students as well as diplomates and graduates. Careers talks are given to all final year students and information and advice on job vacancies and applications.

14.5 School Staff and Resources

The Faculty of Computing, Engineering and Technology has highly qualified and experienced academic, technical and administrative staff with a commitment to delivering high quality courses. Most staff have industrial experience and are engaged in a range of research, consultancy and other staff development activities

The Faculty of Computing, Engineering and Technology supports a wide range of electrical, electronic, media, mechanical and manufacturing engineering and technology awards with well equipped laboratories including those for communications, signal processing, electronics and media technology.

The School also provides computing facilities over and above those supplied by the University, again these are supplied to be used.

14.6 Faculty Office

The Faculty of Computing, Engineering and Technology Office can be found on the first floor of the Octagon building. Amongst other things, the Office is there to answer any queries you may have as well as to take your assignments by the hand-in date (you will be given a receipt based on a standard anonymous submission coversheet)

The Faculty Office will also take messages from you for members of staff.

The Faculty Office is open to answer enquiries at the following times:

Monday - Friday 8.30am – 3.30pm

14.7 Student Resource Rooms K113 and K034

K034 is a communal student resource with meeting tables. K113 contains a number of PC's with specialist engineering software. Both these rooms are available in the evenings and at weekends at the following times:

Mon - Fri 9am – 9pm, Sat & Sun 1- 6pm, term time only.

14.8 Contacting Lecturers

Academic staff have offices on the 2nd & 3rd floors of C Block and the 1st Floor of D Block and also in the Octagon.

There are a number of ways in which you can arrange to see your Lecturers. Many Lecturers operate an appointment system. This means that you need to arrange an appointment before the meeting. You should get into the habit of doing this since you will find that it saves both your time and your Lecturers' time. It is better to have a pre-defined appointment where you know that people will be available, rather than waiting around in corridors and trying to meet by chance.

To arrange an appointment you can:

e-mail the lecturer, requesting an appointment.

Leave a message on the notice board outside their office with **your** contact details

Leave a message with the Faculty Office with **your** contact details

Telephone the lecturer requesting an appointment

Telephone the School Office saying that you need speak to a lecturer

Other Lecturers may have a pre-defined time slot during the week where you are welcome to drop in to discuss any issues you may have. Information relating to staff offices, telephone numbers and email addresses can be found on the Faculty's Web pages:

http://www.staffs.ac.uk/directory/viewpeople.php?sch_serv_id=34&ver=1

15 OTHER USEFUL INFORMATION/GLOSSARY OF TERMS

Named award

A named award is a validated award identified by a specific Award Structure and ratified by the University's Academic Board.

Curriculum

A curriculum is a structured and coherent set of modules which constitute the award.

Academic session

An academic session is a period of 1 year, running from 1st September in one year to August 31st in the following year. For example the 2007/2008 session is from 1st September 2008 to 31st August 2009.

Teaching Block

The academic year is divided into two periods known as Teaching Blocks each of which will normally include periods of both teaching and assessment.

Levels

Levels are broadly equivalent to academic years of full-time undergraduate study. Level 1 modules are normally appropriate to First year undergraduates, Level 2 modules to Second year undergraduates and Level 3 modules to Third year undergraduates. The MEng awards, have incorporated a fourth Level of

undergraduate study known as Level 4. Part-time students will often study modules at a mix of Levels at any one time.

Modules and Credits

A module is a unit of study attracting a given number of credits at a particular level in direct proportion to its total learning time. The total learning time per credit is 8 hours, which includes student/staff contact time (lectures, practical classes, seminars, tutorials etc.), independent study and assessment. No module can attract less than 10 credits, and therefore the minimum total learning time for a module is 80 hours. The credit rating of all undergraduate modules is either 10 or a multiple of 10. Credits are also sometimes referred to as CATS points (you should read the Glossary item on CATS for more details). Every module is allocated to a Level. Every module is identified by a unique code, the suffix of which indicates its Level. For example a Level 2 module is shown by its -2 suffix.

Modules which are larger than 10 credits and delivered over two Teaching Blocks are often referred to as serial or "long-Double" modules. Modules which are larger than 10 credits and delivered wholly within one Teaching Block are often referred to as parallel or "short-fat" modules. It is your responsibility to make sure you know the delivery pattern of all multiple modules for which you enrol.

Module Handbooks

Module Handbooks are provided by the module tutors and contained detailed information concerning syllabus and teaching plans, learning and assessment strategies and details of supporting text books.

Core modules

Core modules are those which must be studied in order to gain a particular named award. They are specified as part of the award structure and form the central pillar of the award. Core modules attract specific credit for an award.

Option modules

Option modules are those which you must select from within a prescribed set for your award. They are sometimes referred to as specific options. Option modules attract specific credit for an award.

General Option Group modules

General Option Group modules are available only at Levels 2 and 3. They are chosen from a list determined by the award for which you are registered, subject to availability, pre-requisites/special admission requirements or timetable constraints. Each award may have a different General Option Group list. A module which is a core or option module for one named award may be taken by students on other named awards as a General Option Group module. General Option Group modules attract general credit for an award.

Module Enrolment

It is your responsibility to make sure that your choice of modules matches the award structure for your award at each and every Level. If it does not you may not be eligible for consideration for the award for which you have registered.

Exceptionally you may be allowed to change your choice of modules. This will only be allowed in cases where there is a sound academic justification for the change. Any change you make to your choice of modules must be made within four weeks of the start of the module. The procedure for changing your choice of modules is detailed in the University Regulations.

Programme of study

Your programme of study is your overall choice of modules which may be unique to each individual student because of the elements of choice involved in awards (option, elective and general option group modules).

Special Admissions Requirements

There are some modules within the University which you will not be allowed to study unless you have met certain conditions. One of these conditions may be that you have first studied (not necessarily successfully completed) certain other modules. These conditions are known as "Special Admissions Requirements" for the module in question. Special admissions requirements are not always related to the study of specific modules. Other appropriate qualifications gained outside the University can satisfy special admissions requirements for a module. In some cases special admissions requirement may be one out of a group of specified requirements. There may also be award specific admissions requirements for some awards.

Pre-requisite

There are some modules within the University which you will not be allowed to study unless you have met certain conditions. In some cases the conditions will be that you have first achieved pass grades in certain other modules at a lower Level. These other modules are known as pre-requisites for the module in question.

In some cases a pre-requisite may be one out of a group of specified modules. You will not be allowed to study any modules for which you have not met the pre-requisites, even if you have been allowed to progress to the Level of that module.

Co-requisite

A co-requisite is a module which must be studied in addition to and normally at the same time as a particular module.

Prohibited combinations

Where two (or more) modules contain content which is similar in nature or where there is a significant overlap you will not normally be allowed to study them both. They will therefore be designated a prohibited combination.

General credit

General credit is that attracted by study of modules not forming part of the structure of the award for which a student is registered. Those modules will normally be designated either Elective Modules or General Option Group Modules. General credit may also be awarded as part of the Accreditation of Prior (Experiential) Learning Scheme (see AP(E)L).

Specific credit

Specific credit is that attracted by study of modules which do form part of the structure of the award for which a student is registered. Those modules will normally be designated either Core modules or Option modules. Specific credits may also be awarded as part of the Accreditation of Prior (Experiential) Learning scheme (see AP(E)L).

Assessment Board

The Assessment Board of each Field will consider all assessment marks of all modules available within that field, irrespective of which named awards the students may have registered for. Assessment Boards meet at least once in each academic year normally at the end of the second Teaching Block. Fields which wish to do so may also hold an Assessment Board at the end of the first Teaching Block.

Award Board

Each named award will have an Award Board, which will determine the final outcomes of the students registered for that award. The Award Board will receive the results of the module assessments agreed by all contributing Assessment Boards. Award Boards will normally meet at the end of the second Teaching Block of an Academic Year. Where necessary they may also meet at other times of the year.

External Examiners

External examiners attend both the assessment Board and the Award Board. The role of the External Examiners is:-

(a) at Assessment Boards

- to consider distribution/spread of Grade Points within modules and across the Field and to assist the Board to confirm appropriate module results.
- to ensure comparability of standards across institutional boundaries.
- to ensure parity of treatment of students both within each module and across the Field.

In carrying out his/her role the External Examiner may consider any appropriate assessed work.

(b) at Award Boards

to ensure that the University Regulations are applied consistently and objectively to all candidates.

Grade points

A Grade point is the result awarded to a student as a measure of performance in the assessment of modules at Level 2 or 3.. The Grade Point (GP) scale can be related to Honours classifications as shown in the table included in an earlier section of this handbook. The approximate correlation of GP's to percentages will be covered in the induction session.

Record of Achievement/Transcript

Once an Award Board has confirmed your results you may request a Record of Achievement free of charge from the Modularity Office. It is a certificate confirming your module results, signed by the Dean of Students/Academic Registrar. It will show, for each module you have successfully completed, the module code and title, the associated credits (CATS points), the Level of the module and the Grade Point/Result achieved. The record of achievement will not show your Honours classification.

A Transcript (for which a fee will be charged) is also available from the Examinations Office. The Transcript includes all the information shown on the Record of Achievement but additionally included your Honours classification.

Complaints

Staffordshire University and the School of Engineering & Advanced Technology are committed to monitoring and evaluating our services to enhance their quality and ensure that they meet the standards outlined in our Student Charter.

We welcome feedback and comments on the services we provide. We would hope to be able to deal with award related complaints early and on an informal basis, by approach, telephone call or letter to the module tutor, award tutor or failing that, to your personal tutor. If this fails to provide you with a satisfactory outcome, there is a more formal complaints procedure covered at:-

http://www.staffs.ac.uk/images/complaints_tcm68-15862.pdf