

Course Specification

Published Date:	06-Sep-2019
Produced By:	Oliver Jones
Status:	Validated

Core Information

Awarding Body / Institution:	University of Wolverhampton		
School / Institute:	School of Engineering		
Course Code(s):	MA006T01UV MA006T31UV	Full-time Part-time	4 Years 8 Years
UCAS Code:	H641		
Course Title:	BEng (Hons) Electronics and Telecommunications Engineering with Foundation Year		
Hierarchy of Awards:	Bachelor of Engineering with Honours Electronics and Telecommunications Engineering Bachelor of Engineering Electronics and Telecommunications Engineering Diploma of Higher Education Electronics and Telecommunications Engineering Certificate of Higher Education Electronics and Telecommunications Engineering University Statement of Credit University Statement of Credit		
Language of Study:	English		
Date of DAG approval:	01/Sep/2017		
Last Review:	2019/0		
Course Specification valid from:	2014/5		
Course Specification valid to:	2024/5		

Academic Staff

Course Leader:	Muhammad Sayed
Head of Department:	Dr Syed Hasan

Course Information

Location of Delivery:	University of Wolverhampton
Category of Partnership:	Not delivered in partnership
Teaching Institution:	University of Wolverhampton
Open / Closed Course:	This course is open to all suitably qualified candidates.

Entry Requirements:

Entry requirements are subject to regular review. The entry requirements applicable to a particular academic year will be published on the University website (and externally as appropriate e.g. UCAS)

2017 Entry

- DD from A level
- BTEC QCF Extended Diploma grade PPP, BTEC QCF Diploma grade MP
- Pass Access to HE Diploma (Full Award)
- If you've got other qualifications or relevant experience, please contact [The Gateway](#) for further advice before applying.
- International entry requirements and application guidance can be found [here](#)

Other Requirements

Students must have studied a minimum of two years post GCSE level. However, it is expected that some applicants will be mature students with work experience, who wish to further their career development. These applicants will be processed through standard procedures, which may involve an interview as part of the process. Please see <http://wlv.ac.uk/mature> for further information.

Applicants who do not meet the entry requirements may be offered an alternative course.

Distinctive Features of the Course:

The Department of Engineering and Technology specialises in the integration of the mechanical engineering and electrical/electronic engineering disciplines. The BEng Electronics and Telecommunications Engineering course reflects this emphasis and, in addition to gaining in-depth knowledge and understanding of the core subject, students also gain experience of designing engineering systems that incorporate aspects of the mechanical and electrical/electronic technologies.

You will be using industry-standard software. In addition to experimental work at the University you will use Radar equipment at the Cosford Royal Air Force base - the same equipment used to train Air Force personnel.

You will be taught by lecturers who have a wealth of industrial experience in an environment focused on working with, and supporting engineering and technology companies.

The BEng (Hons) Electronics and Telecommunications Engineering course is one of a small number of accredited courses that you can undertake as either a full-time or part-time (day-release) student, thus providing all graduates with equal recognition.

You will participate in a multi-disciplinary group project, necessitating the application of advanced management techniques in a progressive technological environment.

You can develop the skills and knowledge that you need to study at undergraduate level, building on your strengths and working on your weaknesses, so that you can feel confident that by the end you are ready to commence a degree course, and to apply the skills to undertake the directed and independent learning which will help you to achieve your potential. This will allow you to embark on Level 4 study in an appropriate undergraduate discipline or combined award, confident that you have developed the skills and chosen the most relevant subject area(s) to specialise in, which will allow you to perform strongly at degree level and

enhance your career aims.

Educational Aims of the Course:

The overall aim of this course is to ensure graduates have a comprehensive engineering education combined with specialist knowledge of electronics and communications engineering recognised in the professional engineering community by an accredited degree. This ensures that graduates are equipped with the appropriate knowledge and enterprising spirit to practise professionally and ethically. Thus, the course will:

- address industry's demand for graduates who can integrate the principles and applications of electronics and telecommunications engineering, and apply them to the analysis and synthesis of engineering products and systems across the engineering sector
- enable students to pursue professional careers in the electronics or telecommunications engineering field at a level which requires the exercise of sound judgement, and initiative, and the ability to make informed decisions in complex and unpredictable circumstances that reflect a responsible, ethical, and socially aware outlook
- furnish students with a detailed understanding of the principles of electrical engineering, electronics, telecommunications and mechanical engineering science, enabling the rational selection of the most appropriate approach to solve engineering problems
- engender a top-down, systems approach to the analysis, synthesis and realisation of electronic and telecommunications products and systems.
- provide a broadly based education in electrical engineering, electronics, communications engineering and design allowing scope for entry into a wide range of disciplines within the engineering field.
- require students to participate in a group project where the project team members are drawn from a range of cognate engineering disciplines
- develop the ability to research unfamiliar subject areas in electronics and telecommunications engineering and cognate disciplines, thereby enhancing the creative aspects of engineering design and innovation

Intakes:

September

Major Source of Funding:

HE FUNDING COUNCIL FOR ENGLAND (HEFCE)

Tuition Fees:

Tuition fees are reviewed on an annual basis. The fees applicable to a particular academic year will be published on the University website.

Year	Status	Mode	Amount
2017/8	H	Full Time / Sandwich	£9250.00
2017/8	EU	Full Time / Sandwich	£9250.00
2017/8	Overseas	Full Time / Sandwich	£11475.00
2017/8	H	Part Time	£2835.00
2017/8	EU	Part Time	£2835.00
2017/8	Overseas	Part Time	£5738.00
2018/9	H	Full Time / Sandwich	£9250.00
2018/9	EU	Full Time / Sandwich	£9250.00
2018/9	Overseas	Full Time / Sandwich	£11700.00
2018/9	H	Part Time	£2925.00
2018/9	Overseas	Part Time	£5850.00
2018/9	EU	Part Time	£2925.00
2019/0	H	Full Time / Sandwich	£9250.00
2019/0	EU	Full Time / Sandwich	£9250.00
2019/0	Overseas	Full Time / Sandwich	£12000
2019/0	H	Part Time	£2975.00
2019/0	Overseas	Part Time	£6000
2019/0	EU	Part Time	£2975.00
2020/1	H	Full Time / Sandwich	£9250.00
2020/1	EU	Full Time / Sandwich	£9250.00
2020/1	Overseas	Full Time / Sandwich	£12250.00
2020/1	H	Part Time	£3050.00
2020/1	Overseas	Part Time	£6125.00
2020/1	EU	Part Time	£3050.00

PSRB:

None

Course Structure:

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 3

Module	Title	Credits	Period	Type
5MA041	Signal Processing	20	SEM2	Core
5MA044	Applied Instrumentation and Control	20	SEM1	Core
5MA043	Analogue and Digital Telecommunications	20	SEM2	Core
5MA038	Enterprising Group Innovation Project	40	YEAR	Core
5MA042	Digital Systems and Embedded Computing	20	SEM1	Core

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 4

Module	Title	Credits	Period	Type
6MA036	ESEE - Economic, Social, Ethical and Environmental	20	SEM2	Core
6MA046	Microwaves and RF Circuits	20	SEM2	Core
6MA047	Communications System Design	20	SEM1	Core
6MA050	Power Electronics and Electric Machines	20	SEM1	Core
6MA038	Individual Innovation Project	40	YEAR	Core

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 1

Module	Title	Credits	Period	Type
3CC002	Problem Solving Skills in Science and Technology	20	SEM1	Core
3CN001	Communication Life Skills	20	SEM1	Core
3MM001	Fundamental Mathematics Skills	20	SEM1	Core
3MM002	Advanced Mathematics Skills	20	SEM2	Core
3ET005	Mechanical Technology	20	SEM2	Core
3ET006	Electrical Technology	20	SEM2	Core

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 2

Module	Title	Credits	Period	Type
4MA007	Engineering Mathematics	20	SEM1	Core
4MA008	Engineering Science	20	SEM1	Core
4MA028	Engineering Experimentation	20	YEAR	Core
4MA022	Information Systems	20	SEM2	Core
4MA009	Computer Aided Design	20	SEM2	Core
4MA029	Industrial Design Project	20	YEAR	Core

Continuing students will follow the programme indicated below:

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 3

Module	Title	Credits	Period	Type
5MA019	Signal Processing I	20	YEAR	Core
5MA021	Analogue and Digital Electronic Engineering	20	YEAR	Core
5MA022	Analogue and Digital Telecommunications	20	YEAR	Core
5MA023	Control Systems	20	YEAR	Core
5MA020	Embedded Systems Design	40	YEAR	Core

Continuing students will follow the programme indicated below:

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 4

Module	Title	Credits	Period	Type
6MA011	ESEE: Economic, Social, Ethical and Environmental	20	YEAR	Core
6MA021	Signal Processing II	20	YEAR	Core
6MA022	Electronic System Design	20	YEAR	Core
6MA023	Telecommunications System Design	20	YEAR	Core
6MA017	Individual Research Project	40	YEAR	Core

Learning, Teaching and Assessment

Academic Regulations Exemption:

In situations where Professional Body and University regulations differ, the respective Professional Body (IET) regulation will have precedent over the exempted University regulation;

Section 1.2.5 - Exemption to permit less than 33% differentiation (mainly at Level 4 and Level 5) between the majority of named undergraduate Engineering degree programmes.

Section 4.4.1 - Exemption in accordance with Institution of Engineering and Technology (IET) requirements. Compensation will be limited to no more than 20 credits at each level of study and maximum of 40 credits overall. There is no compensation permitted for independent study or postgraduate modules. Deferment of a project submission date at Level 6 or Level 7 is allowed only for exceptional reasons and for a maximum of three months.

APPROVED (by Chair's Action on 11/7/2019).

Section 5.2.2 - Exemption to use all Level 5 and Level 6 module grades excluding placement modules (assessed using a Pass/Fail marking scheme) to contribute towards overall BEng classifications with aggregated weightings at each level of study as follows;

Level	Weighting
4	-
5	25%
6	75%

These above weightings also apply to any students studying less than 120 credits at Level 5.

For students being admitted directly at Level 6, on degrees which do not have professional accreditation, student degree classifications are based upon the average of their highest module grades achieved over 100 credits at Level 6 according to weightings listed below as follows;

Level	Weighting
4	-
5	-
6	100%

For accredited programmes, the PSRB will assess the educational qualifications of an applicant for either IEng or CEng status based upon the receipt of a certified transcript from the University Registry (and with the applicant's authorisation).

APPROVED on 17/5/2018.

Reference Points:

The following PSRB and QAA subject benchmarks have been consulted in the development of learning outcomes of this course, thereby ensuring that the academic requirements of the appropriate PSRBs (Institution of Engineering and Technology (IET)) are addressed:

- Engineering Council UK-SPEC 2015
- Framework for Higher Education Qualifications (FHEQ) - descriptors for a qualification at Honours (H) level and at Masters (M) level:

The School of Engineering and the Built Environment publication "Equality and Diversity in the Curriculum" has been used to inform the design of the teaching and learning materials and the assessment regime.

Learning Outcomes:

Foundation Year Course Learning Outcome 1 (UCCL01)

Solve real world problems using mathematical and statistical techniques

Foundation Year Course Learning Outcome 2 (UCCL02)

Communicate scientifically using oral and written skills to provide information to a variety of audiences.

Foundation Year Course Learning Outcome 3 (UCCL03)

Demonstrate and apply problem solving skills to a range of scientific and technological scenarios.

Foundation Year Course Learning Outcome 4 (UCCL04)

Demonstrate and apply knowledge of a range of scientific and technological subjects.

Foundation Year Course Learning Outcome 5 (UCCL05)

Demonstrate personal development in terms of career choice.

CertHE Course Learning Outcome 1 (CHECLO1)

Demonstrate 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

CertHE Course Learning Outcome 2 (CHECLO2)

Demonstrate an ability to present, evaluate and interpret qualitative and quantitative data, in order to develop lines of argument and make sound judgements in accordance with basic theories and concepts of your subject(s) of study.

CertHE Course Learning Outcome 3 (CHECLO3)

Evaluate the appropriateness of different approaches to solving problems related to your area(s) of study and/or work

CertHE Course Learning Outcome 4 (CHECLO4)

Communicate the results of your study/work accurately and reliably, and with structured and coherent arguments

CertHE Course Learning Outcome 5 (CHECLO5)

Demonstrate the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility

[from September 2020] DipHE Course Learning Outcome 1 (DHE#CLO1)

Demonstrate 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 with an understanding of the limits of your knowledge, and how this influences analyses and interpretations based on that knowledge.

[expires September 2020] DipHE Course Learning Outcome 1 (DHECLO1)

Demonstrate 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 with an understanding of the limits of your knowledge, and how this influences analyses and interpretations based on that knowledge.

[from September 2020] DipHE Course Learning Outcome 2 (DHE#CLO2)

Demonstrate the 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

[expires September 2020] DipHE Course Learning Outcome 2 (DHECLO2)

Demonstrate the 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

[from September 2020] DipHE Course Learning Outcome 3 (DHE#CLO3)

Demonstrate knowledge of the main methods of enquiry in the subject(s) relevant to the named award, and ability to evaluate critically the appropriateness of different approaches to solving problems in the field of study

[expires September 2020] DipHE Course Learning Outcome 3 (DHECLO3)

Demonstrate knowledge of the main methods of enquiry in the subject(s) relevant to the named award, and ability to evaluate critically the appropriateness of different approaches to solving problems in the field of study

[from September 2020] DipHE Course Learning Outcome 4 (DHE#CLO4)

Use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis

[expires September 2020] DipHE Course Learning Outcome 4 (DHECLO4)

Use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis

[from September 2020] DipHE Course Learning Outcome 5 (DHE#CLO5)

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

[expires September 2020] DipHE Course Learning Outcome 5 (DHECLO5)

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

[from September 2020] DipHE Course Learning Outcome 6 (DHE#CLO6)

Demonstrate the qualities and transferable skills necessary for employment, requiring the exercise of personal responsibility and decision-making and undertake further training, developing existing skills and acquire new competences that will enable them to assume significant responsibility within organisations

[expires September 2020] DipHE Course Learning Outcome 6 (DHECLO6)

Demonstrate the qualities and transferable skills necessary for employment, requiring the exercise of personal responsibility and decision-making and undertake further training, developing existing skills and acquire new competences that will enable them to assume significant responsibility within organisations

[from September 2020] Ordinary Degree Course Learning Outcome 1 (ORD#CLO1)

Design, analyse and synthesise electronics and telecommunications engineering products, systems, and processes to demonstrate an innovative and creative approach to design realisation.

[expires September 2020] Ordinary Degree Course Learning Outcome 1 (ORDCLO1)

Design and demonstrate creativity in the design and synthesis of electronic and telecommunications products, systems, and processes and apply an innovative approach to their physical realisation

[from September 2020] Ordinary Degree Course Learning Outcome 2 (ORD#CLO2)

Analyse and evaluate a range of solutions to Electronics and Telecommunications problems, drawn from a broad-based multidisciplinary engineering and technology specialities with an ability to adapt theories or methods to solve unfamiliar problems.

[expires September 2020] Ordinary Degree Course Learning Outcome 2 (ORDCLO2)

Effectively research unfamiliar subject areas in electronics, telecommunications and cognate disciplines, and thereby propose and evaluate a broad range of solutions to engineering problems

[from September 2020] Ordinary Degree Course Learning Outcome 3 (ORD#CLO3)

Select and apply appropriate mathematical and scientific methods to solve problems in the analysis and synthesis of Electronics and Telecommunications products and systems.

[expires September 2020] Ordinary Degree Course Learning Outcome 3 (ORDCLO3)

Select and apply appropriate mathematical methods to solve problems in the analysis and synthesis of electronic and telecommunications engineering systems

[from September 2020] Ordinary Degree Course Learning Outcome 4 (ORD#CLO4)

Contribute to teamwork effectively and ethically, addressing the prominent Electronics and Telecommunications concepts, considering also the wider aspects of social, environmental, ethical, commercial, legal, and enterprise issues through the effective management, communication, policy integration, standard-compliance, planning and self-learning.

[expires September 2020] Ordinary Degree Course Learning Outcome 4 (ORDCLO4)

Lead teams of engineers effectively and ethically, addressing the prominent engineering, social, environmental, and commercial issues

[from September 2020] Ordinary Degree Course Learning Outcome 5 (ORD#CLO5)

Select and apply appropriate software packages along with relevant professional codes for design, analysis, and synthesis of Electronics and Telecommunications systems to critically reflect and communicate the results with appropriate levels of detail.

[expires September 2020] Ordinary Degree Course Learning Outcome 5 (ORDCLO5)

Select and apply appropriate software packages for design, analysis, and synthesis applications and critically evaluate the results

[from September 2020] Ordinary Degree Course Learning Outcome 6 (ORD#CLO6)

Relate theory and practice to the recognition of processes and products thereby facilitating the efficient realisation of viable electronics and telecommunications engineering products, systems and processes.

[expires September 2020] Ordinary Degree Course Learning Outcome 6 (ORDCLO6)

Relate theory and practice, thereby facilitating the efficient realisation of viable electronic and telecommunication engineering products and systems

[from September 2020] Honours Degree Course Learning Outcome 1 (DEG#CLO1)

Design, analyse and synthesise electronics and telecommunications engineering products, systems, and processes to demonstrate an innovative and creative approach to design realisation.

[expires September 2020] Honours Degree Course Learning Outcome 1 (DEGCLO1)

Design and demonstrate creativity in the design and synthesis of electronic and telecommunications products, systems, and processes and apply an innovative approach to their physical realisation

[from September 2020] Honours Degree Course Learning Outcome 2 (DEG#CLO2)

Analyse and evaluate a range of solutions to Electronics and Telecommunications problems, drawn from a broad-based multidisciplinary engineering and technology specialities with an ability to adapt theories or methods to solve unfamiliar problems.

[expires September 2020] Honours Degree Course Learning Outcome 2 (DEGCLO2)

Effectively research unfamiliar subject areas in electronics, telecommunications and cognate disciplines, and thereby propose and evaluate a broad range of solutions to engineering problems

[from September 2020] Honours Degree Course Learning Outcome 3 (DEG#CLO3)

Select and apply appropriate mathematical and scientific methods to solve problems in the analysis and synthesis of Electronics and Telecommunications products and systems.

[expires September 2020] Honours Degree Course Learning Outcome 3 (DEGCLO3)

Select and apply appropriate mathematical methods to solve problems in the analysis and synthesis of electronic and telecommunications engineering systems

[from September 2020] Honours Degree Course Learning Outcome 4 (DEG#CLO4)

Contribute to teamwork effectively and ethically, addressing the prominent Electronics and Telecommunications concepts, considering also the wider aspects of social, environmental, ethical, commercial, legal, and enterprise issues through the effective management, communication, policy integration, standard-compliance, planning and self-learning.

[expires September 2020] Honours Degree Course Learning Outcome 4 (DEGCLO4)

Lead teams of engineers effectively and ethically, addressing the prominent engineering, social, environmental, and commercial issues

[from September 2020] Honours Degree Course Learning Outcome 5 (DEG#CLO5)

Select and apply appropriate software packages along with relevant professional codes for design, analysis, and synthesis of Electronics and Telecommunications systems to critically reflect and communicate the results with appropriate levels of detail.

[expires September 2020] Honours Degree Course Learning Outcome 5 (DEGCLO5)

Select and apply appropriate software packages for design, analysis, and synthesis applications and critically evaluate the results

[from September 2020] Honours Degree Course Learning Outcome 6 (DEG#CLO6)

Relate theory and practice to the recognition of processes and products thereby facilitating the efficient realisation of viable electronics and telecommunications engineering products, systems and processes.

[expires September 2020] Honours Degree Course Learning Outcome 6 (DEGCLO6)

Relate theory and practice, thereby facilitating the efficient realisation of viable electronic and telecommunication engineering products and systems

[from September 2020] Honours Degree Course Learning Outcome 7 (DEG#CLO7)

Validate, manage and implement a research study in your discipline and effectively disseminate the findings that arise.

Overview of Assessment:

Module	Title	Course Learning Outcomes
3CC002	Problem Solving Skills in Science and Technology	UCCL01, UCCL03
3CN001	Communication Life Skills	UCCL02, UCCL04, UCCL05
3ET005	Mechanical Technology	UCCL02, UCCL04, UCCL05
3ET006	Electrical Technology	UCCL02, UCCL04, UCCL05
3MM001	Fundamental Mathematics Skills	UCCL01, UCCL04, UCCL05
3MM002	Advanced Mathematics Skills	UCCL01, UCCL04, UCCL05
4MA007	Engineering Mathematics	CHECLO2, CHECLO3, CHECLO5
4MA008	Engineering Science	CHECLO2, CHECLO3
4MA009	Computer Aided Design	CHECLO1, CHECLO4, CHECLO5
4MA022	Information Systems	CHECLO1, CHECLO2, CHECLO3
4MA028	Engineering Experimentation	CHECLO2, CHECLO5
4MA029	Industrial Design Project	CHECLO1, CHECLO2, CHECLO3, CHECLO4, CHECLO5
5MA016	Industrial Placement	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
5MA019	Signal Processing I	DHECLO1, DHECLO2, DHECLO4
5MA020	Embedded Systems Design	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
5MA021	Analogue and Digital Electronic Engineering	DHECLO1, DHECLO3, DHECLO5, DHECLO6
5MA022	Analogue and Digital Telecommunications	DHECLO1, DHECLO2, DHECLO4, DHECLO6
5MA023	Control Systems	DHECLO3, DHECLO5, DHECLO6
5MA038	Enterprising Group	DHE#CLO1, DHE#CLO2, DHE#CLO3, DHE#CLO4, DHE#CLO5, DHE#CLO6

Module	Innovation Project Title	Course Learning Outcomes
5MA041	Signal Processing	DHE#CLO1, DHE#CLO2, DHE#CLO3, DHE#CLO6
5MA042	Digital Systems and Embedded Computing	DHE#CLO1, DHE#CLO2, DHE#CLO3, DHE#CLO6
5MA043	Analogue and Digital Telecommunications	DHE#CLO1, DHE#CLO2, DHE#CLO3, DHE#CLO6
5MA044	Applied Instrumentation and Control	DHE#CLO2, DHE#CLO3
6MA011	ESEE: Economic, Social, Ethical and Environmental	DEGCLO1, DEGCLO2, DEGCLO6, ORDCLO1, ORDCLO2, ORDCLO6
6MA017	Individual Research Project	DEGCLO2, ORDCLO2
6MA021	Signal Processing II	DEGCLO3, DEGCLO5, ORDCLO3, ORDCLO5
6MA022	Electronic System Design	DEGCLO1, DEGCLO2, DEGCLO3, DEGCLO5, DEGCLO6, ORDCLO1, ORDCLO2, ORDCLO3, ORDCLO5, ORDCLO6
6MA023	Telecommunications System Design	DEGCLO1, DEGCLO2, DEGCLO3, DEGCLO5, DEGCLO6, ORDCLO1, ORDCLO2, ORDCLO3, ORDCLO5, ORDCLO6
6MA036	ESEE - Economic, Social, Ethical and Environmental	DEG#CLO4, DEG#CLO6, ORD#CLO4, ORD#CLO6
6MA038	Individual Innovation Project	DEG#CLO1, DEG#CLO2, DEG#CLO3, DEG#CLO4, DEG#CLO5, DEG#CLO6, DEG#CLO7, ORD#CLO1, ORD#CLO2, ORD#CLO3, ORD#CLO4, ORD#CLO5, ORD#CLO6
6MA046	Microwaves and RF Circuits	DEG#CLO1, DEG#CLO2, DEG#CLO3, DEG#CLO6, ORD#CLO1, ORD#CLO2, ORD#CLO3, ORD#CLO6
6MA047	Communications System Design	DEG#CLO1, DEG#CLO2, DEG#CLO3, DEG#CLO5, ORD#CLO1, ORD#CLO2, ORD#CLO3, ORD#CLO5
6MA050	Power Electronics and Electric Machines	DEG#CLO1, DEG#CLO2, DEG#CLO3, DEG#CLO5, DEG#CLO6, ORD#CLO1, ORD#CLO2, ORD#CLO3, ORD#CLO5, ORD#CLO6

Teaching, Learning and Assessment:

The following learning activities support the achievement of the course learning outcomes:

1. Reading – core and supplementary texts, journals and electronic sources
2. Group activities aimed at developing team-working skills in a multi-disciplinary environment
3. Preparing written presentations; both analytically and textually based
4. Oral presentations; both group and individual
5. Lectures and laboratory sessions
6. Group and individual tutorials
7. Engaging in informed discussion with fellow students and academic staff in tutorials and seminars
8. Information retrieval from articles, journals and books for assessments
9. Problem-based learning techniques, e.g. design projects, case studies
10. Providing solutions to meet real world problems/requirements
11. Solving closed and open ended problems
12. Using computer software and hardware to model and simulate products and engineering systems
13. Engaging in informed discussion with fellow students and academic staff in tutorials
14. Student led presentations
15. Researching articles, journals and books for assessments
16. Applying systematic methods to develop (novel) solutions
17. Coursework reports (technical and discursive)
18. Preparing for unseen examinations
19. Writing Project dissertation
20. Critical examination of data

21. Working within accepted guidelines
22. Simulation and problem solving exercises.

Learning and Teaching Methods:

This data indicates the proportion of time in each year of study that students can expect to engage in the following activities (expressed as a percentage for each level).

Level	Teaching	Independent	Placement
3	24	76	0
4	26	74	0
5	24	76	0
6	24	76	0

Assessment Methods:

This data indicates the proportion of summative assessment in each year of study that will derive from the following: (expressed as a percentage for each level).

Level	Written Exams	Practical Exams	Coursework
3	68	0	32
4	42	0	58
5	37	0	63
6	25	0	75

Student Support:

Enhanced learning support is provided in the following areas:

1. Support for mathematics and analytic-based modules via the Mathletics software package
2. Face-to-face tutorial sessions in mathematics
3. Report writing and oral/presentation communications skills
4. Learning centre – literature searches and information searches
5. Practical/lab/experimental activities and reporting
6. Research for project work (major individual, group at M-level, plus group assignments at L5/6)
7. Promotion of *independent learning* during tutorials, face-to-face sessions.

University provided support:

As well as providing general counselling support the University Counselling Service provides short courses on topics such as "Self Confidence", "Stress Management and Relaxation" and "Life Skills". They also provide study skills and academic support, providing short courses such as provide help in areas such as "Writing and Assignment Skills", "Exam Techniques", "Enhancing Professional Skills", "Personal Development Planning" and "Making Choices for the Future."

In addition to the subject knowledge that you will gain from studying on your course, there are opportunities available to develop a range of skills that will help with your academic work; such academic skills include

giving presentations, group work, academic writing, referencing and time management.

The Learning and Skills Team in Learning and Information Services (LIS) offer year-round academic skills support and guidance to all students. Students who are new to academic study and unsure of how to get started, or any student who wants to improve on their academic performance can attend drop-in sessions and workshops, or obtain advice via email or Skype. More details about how the Learning and Skills Team can help you are available at; <http://www.wlv.ac.uk/skills>

Employability in the Curriculum:

The field of information systems, supported by electronics and communications, is extensive and services a rapidly expanding market. Graduates from this course will find many opportunities for well-paid jobs such as designing communication networks, managing networks, or developing novel electronic systems. The multidisciplinary nature of the electronics and telecommunications engineering subject area provides career opportunities in a broad spectrum of industries, from consumer goods design and manufacture to large process control plants, and of course the telecommunications sector. The course enables graduates to attain management positions, with significant levels of responsibility within a relatively short time. Graduates may also study for a taught postgraduate degree, MSc, or a research degree, MPhil/PhD, within the Department.

The transferable skills gained during the course, including: project management, group working, and analytical thinking, also enable a graduate to pursue careers in nontechnical fields such as: law, accountancy, authoring, and computing.



THE UNIVERSITY OF OPPORTUNITY