University of Hertfordshire UH

Programme specification

Award title: Electrical and Electronic Engineering (Full time, Semester C Intake)

Title of programme:	Electrical and Electronic Engineering (Full time, Semester C Intake)
Programme code:	ENSLTEE
Awarding institution/body:	University of Hertfordshire
Teaching institution:	University of Hertfordshire
School:	School of Physics, Engineering and Computer Science
University/partner campuses:	Sri Lanka Telecom, Welisara, Sri Lanka
Programme accredited by:	Not Applicable
Final qualification:	Bachelor of Engineering with Honours (BEng (Hons)) [Level 6, 360 credits]
Final award title (qualification and subject):	BEng (Hons) Electrical and Electronic Engineering
UCAS code:	
FHEQ level of award:	6
Language of delivery:	English
This programme specification is relevant to:	2025-26
Students entering at:	Semester C
Related programmes:	
Mode of study:	Full Time
Typical duration:	3 Years
Version:	1.1
Version date:	10 Oct 2025
Version description	Updated entry requirements wording placement
Validation status:	Validated

What is a programme specification?

A programme specification is a collection of key information about a programme of study (or course). It identifies the aims and learning outcomes of the programme, lists the modules that make up each stage (or year) of the programme, and the teaching, learning and assessment methods used by teaching staff. It also describes the structure of the programme, its progression requirements and any programme-specific regulations. This information is therefore useful to potential students to help them choose the right programme of study, to current students on the programme, and to staff teaching and administering the programme.

This programme specification (PS) is designed for prospective students, enrolled students, academic staff and potential employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the teaching, learning and assessment methods, learning outcomes and content for each module can be found in Definitive Module Documents (DMDs) and Module Guides.

Changes to your course or modules

Although it is never something we do lightly, we may in certain circumstances, make changes to the advertised content or structure or methods of delivery of your course or individual modules after you have accepted your offer, which may in certain cases include discontinuing a module. We cannot cover here every possible example of when we might decide to do so, but in normal circumstances it would only be for one or more of the following reasons:

- to reflect changes to the theory in an area of research or practices around the subject or its delivery
- to improve a course or a module (for example, to take account of feedback from students)
- to safeguard academic standards
- to comply with the requirements of an external professional, commissioning or accrediting body (for example, a requirement that certain course content be added, changed or removed or that a particular module is discontinued or included)
- to comply with legal, regulatory or governmental requirements
- to safeguard the health, safety and wellbeing of our students and staff
- where insufficient students have chosen an optional module making it unviable *(and where we have indicated in this Programme Specification that this might be a possibility)*
- where the University has found it difficult, for reasons beyond its control, to appoint a member of staff with appropriate expertise to ensure that an optional module can proceed where the change results from other circumstances outside our reasonable control

If we decide to make a change (other than one which is minor or insignificant) before you have registered on the course for the first time, we will inform you as soon as reasonably practicable so that you can decide whether or not you still wish to study with us. If as a consequence you decide not to study with us, we will refund any tuition fees and/or deposit that you have paid in advance in respect of the course in question. For further details regarding our refund policy please see our ***Fees and Finance Policy***.

If we decide to make a change (other than one which is minor or insignificant) after you have registered, we will similarly inform you as soon as reasonably practicable, and we will also use every reasonable effort to minimise any adverse effect it may have on you. If in spite of our efforts

the change is likely to have a serious adverse effect on you (for example, by prejudicing your future choice of career), we will try to find you a suitable alternative course or module with us or (if you prefer) we will try to suggest a suitable alternative course with another education provider. If you change course or module in these circumstances (or simply withdraw from your course), any entitlement you may have to a refund in tuition fees you have already paid will be determined in accordance with our ***Fees and Finance Policy***.

In the case of a material change to a course or module, we will also in appropriate circumstances consult with student representatives with a view to identifying options for, and minimising any adverse effect on, affected students.

Some optional modules may have capacity issues and therefore we may not be able to guarantee you a place on your first choice.

More information about how we will try protect you against changes to your modules or programmes can be found in our ***Student Protection Plan*** at https://www.herts.ac.uk/study/your-offer-package

Additional important points

The normal entry requirements for the programme are:

Level 4 Entry:

Applicants should have obtained at least 3 simple passes in local or UK A-levels, which must include Mathematics and either Physics or Technology or engineering-based subjects. Applicants with 2 simple passes in local or UK A-levels, including Mathematics and either Physics or Technology or engineering-based subjects, may be considered, subject to evaluation by the Admissions Tutor.

Plus:
Credit pass for English language in local O-levels or simple pass for English language in either Local or UK A-Levels.

Entry is normally at level 4 (with A-level or equivalent qualifications) but is possible at level 5 with suitable qualifications/experience (e.g. an Edexcel HND in Engineering with appropriate subjects studied). Direct entry into level 6 is also possible with suitable qualifications/experience (e.g. an Edexcel HND in Engineering with appropriate subjects studied or following successful completion of two years of a similar BEng degree programme at another HE institution).

The programme is subject to the University's Principles, Policies and Regulations for the Admission of Students to Undergraduate and Taught Postgraduate Programmes (in UPR SA03), along with associated procedures. These will take account of University policy and guidelines for assessing accredited prior certificated learning (APCL) and accredited prior experiential learning (APEL).

For more information on features offered in this course, please contact the Programme Leader.

Admissions information

The normal entry requirements for the programme are:

Qualification type	Subjects	Grades
Recognition Prior to Learning		For current entry tariff point requirements, please refer to the relevant page for the Course on the University website or on the online prospectus.

Equivalent qualifications will be considered on an individual basis, such as the Access to HE Certificate or approved equivalent.

For current entry tariff point requirements, please refer to the relevant page for the Course on the University website or on the online prospectus.

The programme is subject to the University's Principles, Policies and Regulations for the Admission of Students to Undergraduate and Taught Postgraduate Programmes (in UPR SA03), along with associated procedures. These will take account of University policy and guidelines for assessing accredited prior certificated learning (APCL) and accredited prior experiential learning (APEL).

If you would like this information in an alternative format, please contact us via https://ask.herts.ac.uk/contact-us

If you wish to receive a copy of the External Examiner's Report for the programme, please email a request to aqo@herts.ac.uk

Additional admissions information

Interview/audition required:	No
Portfolio required:	No
DBS check required:	No
Occupational health check required:	No
GTC check required:	No

The academic year

The University's academic year is made up of 3 Semesters. For most undergraduate students the academic year is split into two Semesters (A & B). Each of these is made up of teaching weeks followed by exams (the re-sit period falls within Semester C). For further information please follow the link below

Term and semester dates | Study | Uni of Herts

Expected workload

In the UK, a full-time student is expected to spend 1200 hours on their studies each year. Please find below an estimate of how your time will be spent on this course during each year of study.

Year	Lectures, seminars, tutorials	Independent study	Placement
Year 1	33%	67%	0%
Year 2	33%	67%	0%
Year 3	21%	79%	0%

Method of assessment

Year	Test	Written exam	Coursework	Practical
Year 1	19%	20%	61%	0%
Year 2	0%	36%	64%	0%
Year 3	20%	26%	51%	3%

Additional expenses

Please see below a list of expected materials you will need for your studies. You will be given detailed lists when the course starts.

Title	Description	Value type	Cost (£)
None	For more information on student costs for this course, please contact the Programme Leader.	Exact	£0

*Costs vary subject to supplier.
** This is an indicative cost – how much you use and need to replace these supplies will depend on your own style of working and process.

Programme specification detail

A: Programme rationale

The BEng (Hons) in Electrical and Electronic Engineering programme, offered by the University of Hertfordshire through its franchise partner, SLT Mobitel Nebula Institute of Technology, enables students to develop knowledge and skills in a range of topics, such as electrical power, instrumentation, communications, and computing.

Furthermore, as Sri Lanka continues its development journey, the country is actively fostering industries that attract startups and foreign investors, particularly in sectors such as renewable energy, power control, instrumentation, electronic appliance manufacturing, communications, and computing. Therefore, the availability of qualified Electrical and Electronic Engineering graduates is crucial. In response to this demand, the government is actively promoting private sector engineering education to expedite the development of engineering graduates and meet the demand in the market.

Graduates can expect to gain employment either within the industries directly associated with their named award or within the broader field of computer and electronics engineering. Alternatively, graduates may continue their education to a postgraduate level, and the University of Hertfordshire has a range of taught MSc awards and research awards that graduates may consider.

B: Educational aims of the programme

The programme has been devised in accordance with the University's graduate attributes of programmes of study as set out in UPR TL03.

https://www.herts.ac.uk/about-us/our-leadership-strategy-and-plans/our-governance-and-leadership

Additionally this programme aims to:

provide high quality education in electrical and electronic engineering;

provide an education for the individual which enhances their prospects of professional employment in engineering and business both in national and international industries;

provide studies which develop an awareness of and underpinning knowledge and understanding of a broad range of Electrical and Electronic Engineering areas of expertise.

C: Intended learning outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills and other attributes in the following areas. The programme outcomes are referenced to the QAA benchmark statements for Engineering and the Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2014) and relate to the typical student. Additionally, the SEEC Credit Level Descriptors for Further and Higher Education (2021) have been used as a guiding framework for curriculum design.

Programme outcomes

Learning outcomes are split into four different types.

Intellectual skills

On successful completion of this programme, a student will be able to:

IS1 Analyse and solve electrical and electronic engineering problems using appropriate techniques.
IS2 Model and analyse engineering systems.
IS3 Select appropriate computer-based methods for engineering and communication.
IS4 Evaluate external influences on the design process.
IS5 Design electrical and electronic systems, components or processes.

Knowledge and understanding

On successful completion of this programme a student will have knowledge and understanding of:

KU1 Demonstrate knowledge and understanding of the analytical methods employed by Engineers.
KU2 Demonstrate knowledge and understanding of the fundamental engineering sciences.
KU3 Demonstrate knowledge and understanding of the design principles and design-to-build processes appropriate to electrical and electronic systems.
KU4 Demonstrate knowledge and understanding of the basic principles and economic, social, legal, ethical and sustainability considerations of the business of engineering.
KU5 Demonstrate knowledge and understanding of professional engineering practice principles.

Practical skills

On successful completion a student will be able to:

PS1 Apply analytical and modelling techniques to solve engineering problems.
PS2 Perform experimental work in electrical and electronic engineering and draw conclusions.
PS3 Use computer-based engineering tools.
PS4 Prepare and evaluate technical documentation.
PS5 Evaluate the design of electrical and electronic systems, components or processes.
PS6 Plan and manage a project, considering economic, social, legal, ethical and sustainability constraints.

Transferable skills

On successful completion of this programme, a student will be able to:

TS1 Communicate effectively, both orally and in writing.
TS2 Use commonly available IT tools.
TS3 Manage time and resources effectively.
TS4 Work effectively within a team as a member.
TS5 Manipulate, sort and present data.
TS6 Solve problems in a logical manner.
TS7 Learn effectively and independently, in all aspects of life.

Graduate Attributes

Graduate Attributes are delivered in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the development of the Graduate Attributes (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own personal and professional development as the programme progresses**.**

GA1 Professionally Focused
GA2 Globally Minded
GA3 Sustainability Driven
GA4 Digitally capable and confident
GA5 Inclusive and collaborative
GA6 Evidence based and ethical

D: Teaching methods

Knowledge and Understanding (KU):

Acquisition of KU1 and KU2 is through a combination of lectures, small group tutorials, coursework and laboratory work at levels 4 and 5 of the programme.

Specialist aspects of KU2 are further developed at level 6.

Acquisition of KU3, KU4, and KU5 is through a combination of lectures, projects and coursework throughout the programme.

Staff deploy a range of teaching and learning strategies in the most appropriate way for each individual module. A more didactic approach will tend to be adopted at lower levels, in particular for KU1 and KU2. An increasingly self-directed and interactive approach will be adopted at higher levels, particularly for KU3, KU4 and KU5.

Throughout, the learner is encouraged to undertake independent study both to supplement and consolidate what is being taught/learnt and to broaden their individual knowledge and understanding of the subject.

Intellectual Skills (IS):

Intellectual skills are developed throughout the programme by the methods and strategies outlined for section A of the intended learning outcomes above, again moving from a more didactic approach to an increasingly self-directed and interactive approach at higher levels, particularly for IS3, IS4 and IS5.

Analysis, problem solving and modelling skills (IS1 and IS2) are further developed through tutorial work, laboratory work, in-course exercises and project work.

Design and IT skills (IS3-IS5) are further developed through project work, design exercises and some case study work at level 6.

Feedback is given to all students on all coursework produced.

Throughout, the learner is encouraged to develop intellectual skills further by independent study.

Practical Skills (PS):

Practical skills are developed throughout the programme by the methods and strategies outlined in

sections A and B of the intended learning outcomes above, again moving from a more didactic approach to an increasingly self-directed and interactive approach at higher levels, particularly for PS4, PS5 and PS6.

PS1 is developed through laboratory work, coursework assignments and tutorial work.

PS2 is developed through laboratory work.

PS3 is developed through the use of software simulation tools at all levels.

PS4 is developed through project work, lab exercises and software documentation, particularly at level 4.

PS5 is developed through laboratory work at levels 5 and 6.

PS6 is developed through lectures and project work.

Transferable Skills (TS):

Transferable skills are developed throughout the programme by the methods and strategies outlined in sections KU, IS and PS of the intended learning outcomes above.

TS1 is developed through feedback on coursework reports, oral presentations and project reports.

TS2 is developed through their use in preparing project reports, laboratory reports, case studies, design work, etc.

TS3 is developed through project work planning and throughout the programme.

TS4 is developed through group project and assignment work.

TS5 and TS6 are developed through lectures and tutorial work throughout the programme.

TS7 is developed and promoted throughout the programme.

E: Assessment strategy

The programme complies with the University's academic regulations (in particular, UPR AS11, UPR AS12/UPR AS13 and UPR AS14) with the exception of those listed below, which have been approved by the University:

https://www.herts.ac.uk/about-us/our-leadership-strategy-and-plans/our-governance-and-leadership/university-policies-and-regulations-uprs

Assessment Strategy for:

Knowledge and Understanding (KU):

Knowledge and understanding are assessed through a combination of unseen examinations (KU1, KU2, KU3 and KU5) and in-course assessments (KU1-KU5) in the form of laboratory reports, essays and phase tests. Some aspects of KU3 and KU4 are assessed by design exercises and project reports and presentations. At level 6 some aspects of KU5 are assessed by case study

reports.

Intellectual Skills (IS):

Intellectual skills IS1, IS2 and IS5 are assessed through unseen examination papers, laboratory reports and coursework related to in-course exercises.

Intellectual skills IS3 and IS4 are assessed through project reports and presentations.

Practical Skills (PS):

Practical skills are developed throughout the programme by the methods and strategies outlined in sections KU and IS of the intended learning outcomes above, again moving from a more didactic approach to an increasingly self-directed and interactive approach at higher levels, particularly for PS4, PS5 and PS6.

PS1 is developed through laboratory work, coursework assignments and tutorial work.

PS2 is developed through laboratory work.

PS3 is developed through the use of software simulation tools at all levels.

PS4 is developed through project work, lab exercises and software documentation, particularly at level 4.

PS5 is developed through laboratory work at levels 5 and 6.

PS6 is developed through lectures and project work.

Transferable Skills (TS):

Transferable skills are developed throughout the programme by the methods and strategies outlined in sections KU, IS and PS of the intended learning outcomes above.

TS1 is developed through feedback on coursework reports, oral presentations and project reports.

TS2 is developed through their use in preparing project reports, laboratory reports, case studies, design work, etc.

TS3 is developed through project work planning and throughout the programme.

TS4 is developed through group project and assignment work.

TS5 and TS6 are developed through lectures and tutorial work throughout the programme.

TS7 is developed and promoted throughout the programme.

F: Programme specific assessment regulations

The programme complies with the University's academic regulations (in particular, UPR AS11, UPR AS13 and UPR AS14) with the exception of those listed below, which have been approved by the University:

Students exiting with a BEng (Hons) award shall have their degree classification determined in accordance with UPR AS14 and include the individual project in the calculation of degree.

G: Professional accreditation requirements

Not Applicable

H: Management of programme and support for student learning

Management

The programme is managed and administered through:

- The programme is managed and administered through: General Manager at SLT Mobitel Nebula Institute of Technology; Deputy General Manager at SLT Mobitel Nebula Institute of Technology; Programme Leader at SLT Mobitel Nebula Institute of Technology who has overall responsibility for the effective operationalisation of the programme, ensuring that academic standards are maintained and an effective student learning experience is provided. The Programme Leader is also responsible for chairing the programme committee; Deputy Programme Leaders at SLT Mobitel Nebula Institute of Technology to support students at Level 4 and 5, respectively; A Collaborative Partnership Leader, based at UH, to provide support and facilitate communication between UH and SLT Mobitel Nebula Institute of Technology; An Admissions Tutor at SLT Mobitel Nebula Institute of Technology with specific responsibility for admissions and open days; A designated programme administrator; A Programme committee that includes the above key stakeholders and student representatives; Module leaders at SLT Mobitel Nebula Institute of Technology who are responsible for individual modules.

Support

Students are supported by:

- Students are supported by: An induction week at the beginning of each new academic session; A nominated member of SLT academic staff who acts as a personal tutor to provide one-on-one guidance and pastoral support; A Student Handbook which provides information about the programme, the support services available and the calendar of events for the year; An extensive electronic library; A physical library that contains the recommended books and a computer centre; Guided student-centred learning through the use of Canvas; A student handbook that is specific to the programme; Programme Leader who can advise on programme issues; Designated programme administrators; Module teaching teams who provide academic support; A Careers, Employment and Enterprise Service that support students looking for graduate employment; Technical support staff and access to computer and technical laboratories; A project supervisor; Student representatives on the programme committee; Confidential counselling service; An Equal Opportunities Officer and Disability Advisors.

I: Programme structures, features, levels, modules, and credits

Programme structure

Year 1
No information available Maximum credits: 120

Semester	Module Code	Module Title	Credits	Level	Core/optional
C	4FTC2095	Circuit Theory and Analysis	15	4	Core
C	4FTC2097	Digital Electronic Circuits	15	4	Core
C	4FTC2100	Engineering Mathematics	15	4	Core
C	4FTC2105	Project Planning & Design	15	4	Core
A	4FTC2094	Analogue Circuits and Devices	15	4	Core
A	4FTC2099	Electronic Product Development	15	4	Core
A	4FTC2103	Professional Engineering	15	4	Core
A	4FTC2104	Programming	15	4	Core

Year 2
No information available Maximum credits: 120

Semester	Module Code	Module Title	Credits	Level	Core/optional
C	5FTC2135	Analogue and Mixed-Signal Design	15	5	Core
C	5FTC2141	Digital Design & Embedded Systems	15	5	Core
C	5FTC2142	Electric Power and Energy Conversion	15	5	Core
C	5FTC2148	Signals and Systems	15	5	Core
A	5FTC2139	Communication System Principles	15	5	Core
A	5FTC2140	Connected Systems and IoT	15	5	Core
A	5FTC2145	Mechatronics	15	5	Core
A	5FTC2146	Real-Time Systems and Programming	15	5	Core

Year 3
No information available Maximum credits: 120

Semester	Module Code	Module Title	Credits	Level	Core/optional
C	6FTC2155	Digital Communication Systems	15	6	Core

C	6FTC2158	Intelligent Systems and Robotics	15	6	Core
C	6FTC2160	Microelectronics and VLSI	15	6	Core
CA	6FTC2154	BEng Individual Project (Electrical)	30	6	Core
A	6FTC2156	Digital Signal Processing	15	6	Core
A	6FTC2162	Power Systems & Renewable Energy	15	6	Core
A	6FTC2165	Wireless Networking	15	6	Core

Final and interim awards available

Final award	Award title	Minimum requirements	Available at the end of level
BEng (Hons)	Electrical and Electronic Engineering	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm 360 credits, including at least 240 @ Level 6/5, of which at least 120 must be @ Level 6. The title 'Bachelor of Engineering' is reserved for programmes which provide a technologically broad education with an emphasis on engineering applications, primarily those programmes that may lead to registration with the Engineering Council.	6

Interim award	Award title	Minimum requirements	Available at the end of level
BEng	Electrical and Electronic Engineering	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm 300 credits, including at least 180 @ Level 6/5, of which at least 60 must be @ Level 6. The title 'Bachelor of Engineering' is reserved for programmes which provide a technologically broad education with an emphasis on engineering applications.	6
CertHE	(Untitled)	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm 120 credits @ Level 4	4
DipHE	(Untitled)	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm 240 credit points including at least 120 at level 5	5
Uni Cert	(Untitled)	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm 45 credits @ Level 4 This award is available as an unnamed interim award or a named final intended award only.	4

Other sources of information

In addition to this Programme Specification, the University publishes guidance to registered students on the programme and its constituent modules:

- A dedicated programme site on the University's Virtual Learning Environment (Canvas);
- A Definitive Module Document (DMD) for each constituent module;

The Ask Herts website provides information on a wide range of resources and services available at the University of Hertfordshire including academic support, accommodation, fees, funding, visas, wellbeing services and student societies.

As a condition of registration, all students of the University of Hertfordshire are required to comply with the University's rules, regulations and procedures. These are published in a series of documents called 'University Policies and Regulations' (UPRs). The University requires that all students consult these documents which are available on-line, on the UPR web site, at: http://www.herts.ac.uk/secreg/upr/. In particular, UPR SA07 'Regulations and Advice for Students' Particular Attention - Index' provides information on the UPRs that contain the academic regulations of particular relevance for undergraduate and taught postgraduate students.

In accordance with section 4(5) of the Higher Education and Research Act 2017 (HERA), the UK Office for Students (OfS) has registered the University of Hertfordshire in the register of English higher education providers. The Register can be viewed at: https://www.officeforstudents.org.uk/advice-and-guidance/the-register/the-ofs-register/.

Furthermore, the OfS has judged that the University of Hertfordshire delivers consistently very high-quality teaching, learning and outcomes for its students. Consequently, the University received a Silver award in the 2023 Teaching Excellence Framework (TEF) exercise. This award was made in October 2023 and is valid for up to 4 years. The TEF panel's report and conclusions can be accessed via this link.

J: Development of intended programme learning outcomes in the constituent modules

These maps identify where the programme learning outcomes are assessed in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the programme aims (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own learning, personal and professional development as the programme progresses.

X = Delivered and Assessed

Module Code	IS 1	IS 2	IS 3	IS 4	IS 5	KU 1	KU 2	KU 3	KU 4	KU 5	PS 1	PS 2	PS 3	PS 4	PS 5	PS 6	TS 1	TS 2	TS 3	TS 4	TS 5	TS 6	TS 7
4FTC2094	X	X	X			X	X				X	X	X					X					
4FTC2095	X	X	X			X	X				X	X	X					X					
4FTC2097	X	X	X			X	X		X		X	X	X			X		X					
4FTC2099	X	X	X				X	X									X	X		X	X	X	X
4FTC2100	X	X				X	X																
4FTC2103									X	X						X	X	X	X	X			
4FTC2104						X	X			X	X			X				X					
4FTC2105				X	X			X	X	X					X	X	X	X	X	X	X	X	X
5FTC2135	X	X						X	X								X	X		X	X	X	X
5FTC2139	X	X	X			X	X				X	X	X					X					
5FTC2140			X	X	X			X	X	X		X	X		X	X	X	X	X	X	X	X	X
5FTC2141	X	X	X							X		X	X	X				X					
5FTC2142	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X					
5FTC2145	X	X	X	X	X	X	X	X	X		X	X	X		X	X		X					
5FTC2146	X	X	X							X	X	X	X	X				X					
5FTC2148	X	X	X			X	X					X	X					X					
6FTC2154				X	X			X	X	X	X			X	X	X	X	X	X		X	X	X
6FTC2155	X	X	X			X	X				X	X	X					X					
6FTC2156	X	X	X			X	X				X	X	X					X					
6FTC2158	X	X	X			X	X					X	X					X					
6FTC2160	X	X	X									X	X					X					

6FTC2162	X	X	X						X		X	X		X	X	X		X		
6FTC2165	X	X	X	X	X	X	X	X	X		X	X	X		X	X		X		

Key to module codes

Module code	Level	Title
4FTC2094	4	Analogue Circuits and Devices
4FTC2095	4	Circuit Theory and Analysis
4FTC2097	4	Digital Electronic Circuits
4FTC2099	4	Electronic Product Development
4FTC2100	4	Engineering Mathematics
4FTC2103	4	Professional Engineering
4FTC2104	4	Programming
4FTC2105	4	Project Planning & Design
5FTC2135	5	Analogue and Mixed-Signal Design
5FTC2139	5	Communication System Principles
5FTC2140	5	Connected Systems and IoT
5FTC2141	5	Digital Design & Embedded Systems
5FTC2142	5	Electric Power and Energy Conversion
5FTC2145	5	Mechatronics
5FTC2146	5	Real-Time Systems and Programming
5FTC2148	5	Signals and Systems
6FTC2154	6	BEng Individual Project (Electrical)
6FTC2155	6	Digital Communication Systems
6FTC2156	6	Digital Signal Processing
6FTC2158	6	Intelligent Systems and Robotics
6FTC2160	6	Microelectronics and VLSI
6FTC2162	6	Power Systems & Renewable Energy
6FTC2165	6	Wireless Networking

Key to programme learning outcomes for Intellectual Skills

IS1 Analyse and solve electrical and electronic engineering problems using appropriate techniques.

IS2 Model and analyse engineering systems.

IS3 Select appropriate computer-based methods for engineering and communication.

IS4 Evaluate external influences on the design process.

IS5 Design electrical and electronic systems, components or processes.

Key to programme learning outcomes for Knowledge and Understanding

KU1 Demonstrate knowledge and understanding of the analytical methods employed by Engineers.

KU2 Demonstrate knowledge and understanding of the fundamental engineering sciences.

KU3 Demonstrate knowledge and understanding of the design principles and design-to-build processes appropriate to electrical and electronic systems.

KU4 Demonstrate knowledge and understanding of the basic principles and economic, social, legal, ethical and sustainability considerations of the business of engineering.

KU5 Demonstrate knowledge and understanding of professional engineering practice principles.

Key to programme learning outcomes for Practical Skills

PS1 Apply analytical and modelling techniques to solve engineering problems.

PS2 Perform experimental work in electrical and electronic engineering and draw conclusions.

PS3 Use computer-based engineering tools.

PS4 Prepare and evaluate technical documentation.

PS5 Evaluate the design of electrical and electronic systems, components or processes.

PS6 Plan and manage a project, considering economic, social, legal, ethical and sustainability constraints.

Key to programme learning outcomes for Transferrable Skills

TS1 Communicate effectively, both orally and in writing.

TS2 Use commonly available IT tools.

TS3 Manage time and resources effectively.

TS4 Work effectively within a team as a member.

TS5 Manipulate, sort and present data.

TS6 Solve problems in a logical manner.

TS7 Learn effectively and independently, in all aspects of life.

Development of Graduate Attributes in the constituent modules

This map identifies where the Graduate Attributes are delivered in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the development of the Graduate Attributes (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own personal and professional development as the programme progresses. [Note that there is no requirement for the Graduate Attributes to be assessed through these modules]

D = Delivered

Module Title	Module Code	Level	Professionally Focused	Globally Minded	Sustainability Driven	Digitally Capable & Confident	Inclusive and Collaborative	Evidenced-based and Ethical
Analogue Circuits and Devices	4FTC2094	4	D			D		D
Circuit Theory and Analysis	4FTC2095	4	D			D		D
Digital Electronic Circuits	4FTC2097	4	D			D		D
Electronic Product Development	4FTC2099	4	D	D	D	D	D	D
Engineering Mathematics	4FTC2100	4	D			D		D
Professional Engineering	4FTC2103	4	D	D		D	D	D
Programming	4FTC2104	4	D			D		D
Project Planning & Design	4FTC2105	4	D			D	D	D
Analogue and Mixed-Signal Design	5FTC2135	5	D			D	D	D
Communication System Principles	5FTC2139	5	D			D		D
Connected Systems and IoT	5FTC2140	5	D			D	D	D
Digital Design & Embedded Systems	5FTC2141	5	D			D		D
Electric Power and Energy Conversion	5FTC2142	5	D			D		D
Mechatronics	5FTC2145	5	D			D		D

Real-Time Systems and Programming	5FTC2146	5	D				D				D
Signals and Systems	5FTC2148	5	D				D				D
BEng Individual Project (Electrical)	6FTC2154	6	D				D				D
Digital Communication Systems	6FTC2155	6	D				D				D
Digital Signal Processing	6FTC2156	6	D				D				D
Intelligent Systems and Robotics	6FTC2158	6	D				D				D
Microelectronics and VLSI	6FTC2160	6	D				D				D
Power Systems & Renewable Energy	6FTC2162	6	D	D		D	D		D		D
Wireless Networking	6FTC2165	6	D				D				D