Programme Regulations: 2025/26

Programme Title: BEng (Hons) in Product Design and Development Engineering – Electrical and Electronic Engineering (Degree Apprenticeship)

Code: 1928U

Notes

(i) These programme regulations should be read in conjunction with the University's Taught Programme Regulations.

(ii) All optional modules are offered subject to the constraints of the timetable and to any restrictions on the number of students who may be taught on a particular module. Not all modules may be offered in all years and they are listed subject to availability.

(iii) Unless otherwise stated under 'Type', modules are not core.

(iv) A compulsory module is a module which a student is required to study.

(v) A core module is a module which a student must pass, and in which a fail mark may neither be carried nor compensated; such modules are designated by the board of studies as essential for progression to a further stage of the programme or for study in a further module.

(vi) All modules are delivered in linear mode unless stated otherwise as blended, eLearning or distance learning.

(vii) This programme is a Degree Apprenticeship and will contain a submission of an End Point Assessment (EPA) before any award is acknowledged.

(viii) The period of study for this degree apprenticeship shall normally be 4 years starting in September.

(ix) To be considered for retrospective accreditation appropriate assessment conditions will need to be met.

1. Stage 1

(a) All candidates shall take the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Mode
ENG1501	Engineering Mathematics 1	20	10	10	4	Core	Blended
ENG1502	Industrial Project 1 – Design and Professional Skills	30	10	20	4	Core	Distance
ENG1503	Electrical and Magnetic Systems	20	10	10	4	Core	Blended
ENG1504	Electronics and Sensors	10		10	4	Core	Blended
ENG1506	Properties and Behaviours of Engineering Materials	20	20		4	Core	Blended
ENG1507	Mechanics 1	20	10	10	4	Core	Blended

2. Stage 2/Year 1

(a) All candidates shall take the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Mode
ENG2501	Engineering Mathematics 2	10	10		5	Core	Blended
ENG2502	Automatic Control Systems	10		10	5	Core	Blended
ENG2503	Energy Sources and Storage	10	10		5	Core	Blended

ENG2505	Materials Science	10	10		5	Core	Blended
ENG2509	Electrical Power and Conversion	10		10	5	*Core*	Blended

3. Stage 2/Year 2

(a) All candidates shall take the following compulsory modules:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Mode
ENG2504	Mechanics II	20		20	5	*Compulsory*	Blended
ENG2506	Mathematical Modelling and Statistical Methods	10		10	5	Core	Blended
ENG2507	Design and Manufacturing	20	10	10	5	Core	Blended
ENG2508	Semiconductor Devices and Analogue Electronics	20	20		5	Core	Blended

4. Stage 3

(a) All candidates shall take the following compulsory module:

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Mode
ENG3594	EPA Industrial Project (Dissertation)	60		60	6	Core	Distance

(b) All candidates shall select 60 credits of optional modules (subject to timetabling and KSB requirements). Once selected, such modules will be core for progression.

Code	Descriptive Title	Total Credits	Credits Sem 1	Credits Sem 2	Level	Type	Mode
ENG3511	Power Electronics – Application, Design and Manufacture	15	15		6		Blended
ENG3512	Electric Drives – Application, Control and Manufacture	15	15		6		Blended
ENG3513	Electrical Machines – Application, Design and Manufacture	15	15		6		Blended
ENG3514	Industrial Automation, PLCs and Robotics	15	15		6		Blended
ENG3515	Battery Materials and Characterization	15	15		6		Blended
ENG3516	Chemical and Electrochemical Principles for Batteries	15	15		6		Blended
ENG3517	Battery Manufacturing and Testing	15	15		6		Blended
ENG3518	Battery Management System	15	15		6		Blended
ENG3519	Digital Control, Embedded Systems, Fieldbus Technology	15	15		6		Blended
ENG3520	Machinery Fault Diagnosis and Prognosis	15	15		6		Blended

With the approval of the Degree Programme Director alternative optional modules to those listed above may be selected.

5. Assessment methods

Details of the assessment pattern for each module are explained in the module outline.

Apprentices must complete and pass all credit carrying modules of the BEng Honours engineering degree accredited by an Engineering Council (UK) licensed Professional Engineering Institution (PEI).

6. Degree classification

Candidates will be assessed for degree classification on the basis of all the modules taken at Stages 2 and 3 with the weighting of the stages being 1:3 for Stage 2 and Stage 3 respectively.

Award of the Apprenticeship
Apprenticeship Grading Performance in the EPA will determine the apprenticeship grade of pass, merit, distinction or fail. Each end-point assessment method will be marked and graded, and each should be passed. The individual grades will then be aggregated to produce the final apprenticeship grade. To gain an apprenticeship pass or higher grade, the apprentice must achieve a minimum of a pass in each method. An apprenticeship pass represents full competence against the standard. A grade of merit or distinction means an apprentice is demonstrating competence above the standard.

Award of the BEng (Hons) in Electrical and Electronic Engineering
Apprentices cannot successfully complete the Bachelors' degree without passing the EPA and vice versa.