

Programme Regulations: 2026/27

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 | Core | 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.