

Programme Specification

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Please check the Programme Directory for the most up to date version:

[UG Programme Directory](#)

[PG Programme Directory](#)

Section 1 – Regulatory Details						
1.1	Awarding body	Wrexham University				
1.2	Teaching institution	Wrexham Plas Coch Campus				
1.3	Final award and programme title (Welsh and English)	BEng (Anrh) Peirianeg Ddiwydiannol (Mecanyddol) (Atodol) BEng (Hons) Industrial Engineering (Electrical) (Top Up)				
1.4	Exit awards and titles	N/A				
1.5	Credit requirements	BEng (Hons) Degree – 120 credits at level 6				
1.6	Intake points	Once yearly, September				
1.7	Mode of study	Part time				
1.8	Length of delivery	1 Year				
1.9	Location of delivery	Campus based (Wrexham)				
1.10	Mode of delivery	<table><tr><td>Part time</td><td>In person</td></tr></table>		Part time	In person	
Part time	In person					
1.11	Language of delivery	English				
1.12	Faculty	Faculty of Arts, Computing and Engineering (FACE)				
1.13	Subject area	Engineering				
1.14	HECoS Code	BEng (Hons) Industrial Engineering (Electrical) 100164				
1.15	Suitable for applicants requiring a Student Visa?	<table><tr><td>Part time</td><td>In person</td><td>No</td></tr></table>		Part time	In person	No
Part time	In person	No				
1.16	Is DBS check required on entry?	No				

Section 1 – Regulatory Details			
1.17	Professional, Statutory or Regulatory Body (PSRB) accreditation	The engineering programmes have been developed in line with PSRB requirements, including IMechE, IET, & RAeS. BEng (Hons) Industrial Engineering (Electrical) * IET *Subject to accreditation 2027 IET - https://www.theiet.org This information is correct at the time of validation, please refer to the PSRB register for current accreditation status.	
1.18	Welsh Medium Provision	The programmes will be delivered through the medium of English. Students have the option to submit assessments in the medium of Welsh. To support Welsh Medium development, the programme includes a 20-credit Welsh for STEM module available as a short course for all engineering students.	
1.19	External reference points	QAA Subject Benchmark Statement Engineering (2023) QAA Characteristics Statements Higher Education Credit Framework CQFW PSRB Accreditation Guidelines	
1.20	Derogation to Academic Regulations	Regulation Clause(s) affected	Derogation Summary
		UG-D3	Each element of assessment (where there is more than one assessment) requires a minimum mark of 10% below the pass mark (30% for L6).
		E10.4, UG-E5.1	No compensation allowed for L6 modules.
1.21	Foundation Year route	No	
1.22	Placement / Work based learning	Work based learning is embedded within the programme, which must be completed to pass the modules.	
1.23	Length and level of the placement	N/A	
1.24	Collaborative arrangement	N/A	

Section 2 – Programme Details

2.1 Aims of The Programme

The BEng (Hons) Industrial Engineering (Electrical) is a one-year Level 6 top-up degree designed for individuals who have completed a foundation degree or equivalent qualification in electrical or electronic engineering. The programme enables learners to convert their existing qualification into a full honours degree, with a strong focus on practical, industry-relevant skills.

Delivered through a mix of applied learning and technical study, the course adopts an innovative, exam-free assessment strategy based on coursework, practical tasks, and project work ensuring assessments reflect the demands of real-world engineering environments.

This top-up degree is ideal for those already working in the electrical engineering sector or progressing from an FdEng programme. It supports career development into more senior technical roles, project leadership, or further academic or professional study.

2.2 Programme Structure and Diagram, Including Delivery Schedule

This one-year top-up programme focuses on advanced electrical engineering topics that support modern industrial operations and digital infrastructure. In Semester 1, students engage with Electrical Modelling & Simulation and Digital Communication Techniques, developing skills in system analysis, connectivity, and performance optimisation. Semester 2 covers Systems Engineering and Management, alongside Professional Practice, equipping students with the knowledge to manage reliability, safety, and professional responsibilities in industrial environments.

A central component of the programme is the year-long Project, where students undertake an individual work-based investigation aligned with their professional role or area of interest. This allows them to demonstrate their technical expertise, problem-solving ability, and capacity to deliver impactful solutions within a real-world electrical engineering context.

Part-time Programme Structure

Level	Module Code	Module Title	Credit Value	Core/ Option	Semester of delivery	Year of Study
L6	ENG6C7	Electrical Modelling & Simulation	20	Core	1	Yr.1
L6	ENG6D2	Digital Communication Techniques	20	Core	1	Yr.1
L6	ENG6E2	Systems Engineering and Management	20	Core	2	Yr.1
L6	ENG6E3	Professional Practice	20	Core	2	Yr.1
L6	ENG6E4	Project	40	Core	1 & 3	Yr.1

2.3 Programme Learning Outcomes

The following programme learning outcomes have been fully mapped against the AHEP-4 learning outcomes for Partial IEng with further learning accreditation. B7, B10-B14, B16-B18 Learning outcomes achieved at previous level of study.

No.	Learning Outcome	K	I	S	P	Honours (L6)	Optional Ref (PSRB standards)
1	Apply knowledge of mathematics, statistics, natural science and engineering principles to broadly-defined problems. Some of the knowledge will be informed by current developments in the subject of study within electrical engineering..	☒	☐	☐	☐	☒	B1
2	Analyse broadly-defined problems reaching substantiated conclusions using first principles of mathematics, statistics, natural science and engineering principles within electrical engineering..	☒	☐	☐	☐	☒	B2
3	Select and apply appropriate computational and analytical techniques to model broadly-defined electrical engineering problems, recognising the limitations of the techniques employed.	☒	☐	☐	☐	☒	B3
4	Select and evaluate technical literature and other sources of information to address broadly-defined problems.	☒	☐	☐	☐	☒	B4
5	Design solutions for broadly-defined problems that meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and industry standards.	☐	☒	☐	☐	☒	B5
6	Apply an integrated or systems approach to the solution of broadly-defined problems.	☐	☒	☐	☐	☒	B6
7	Identify and analyse ethical concerns and make reasoned ethical choices informed by professional codes of conduct.	☐	☒	☐	☐	☒	B8

No.	Learning Outcome	K	I	S	P	Honours (L6)	Optional Ref (PSRB standards)
8	Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity.	☐	☒	☐	☐	☒	B9
9	Apply knowledge of engineering management principles, commercial context, project management and relevant legal matters.	☐	☐	☐	☒	☒	B15
10	Plan, conduct and report on an original programme of work (Dissertation).	☒	☒	☒	☒	☒	-

Note: K- Knowledge and understanding; I-Intellectual Skills; S-Subject Skills; P-Practical, professional and employability skills

2.4 Learning and Teaching Strategy

Key to this provision is the opportunity to work on authentic assessments that replicate as best as possible real world engineering careers. Formal examinations have been removed and replaced where possible with coursework, projects or portfolio. Inbuilt into the assessment strategies are timed assessment that may include software-based assessment, practical evaluation or viva style assessments. Assessments are designed to be innovative and inclusive and will evolve as technology develops.

The learning and teaching strategy aligns with WU's Active Learning Framework (ALF) incorporating key employability skills. It is flexible, engaging, and responsive to student diversity and professional demands. A blended approach combines on-campus sessions with virtual study activities.

Face-to-Face Learning

Students will engage in lectures, seminars, and workshops in various settings, incorporating case studies and problem-based learning. The programme is mapped to instructional models that increase laboratory-based learning, critical for reinforcing theoretical knowledge through practical application:

Model A: 100% Classroom

Model B: 50% Classroom / 50% Laboratory

Model C: 25% Classroom / 75% Laboratory

Model D: 100% Laboratory

These models promote deeper learning, research capability, and technical proficiency. Laboratory hours have been increased to allow students to apply classroom-acquired theory, reinforcing understanding and preparing them for future innovation in industry or postgraduate research.

Virtual Learning

Delivered through the VLE and Microsoft Teams, virtual learning includes asynchronous tasks (videos, quizzes, readings, virtual visits) and synchronous activities (discussions, case studies, simulations). Sessions will be recorded where appropriate.

Tutorials

Delivered both in person and online, tutorials promote active participation through individual and group engagement. They are designed to encourage critical thinking, reflective practice, and student-led learning, supporting creativity, independence, and a deeper understanding of subject knowledge and professional practice.

2.5 Assessment Strategy

The assessment strategies are designed to be supportive and to build confidence, whilst also ensuring that students engage with core material, develop the fundamental knowledge and subject skills required for progression of undergraduate studies, and reward and incentivise students.

Assessment tasks are varied to facilitate students to evidence their learning and include portfolio, presentations, practical and oral assessment which promote authentic assessment and encourage the deeper learning that is a key feature of higher education. Formative feedback opportunities are embedded into each of the modules regularly and encourages students to reflect on their progress.

2.5 Assessment Strategy

Feedback is provided within 15 working days of the assessment submission date and may be delivered individually or in groups, in written, verbal, or recorded formats. This ensures that students receive timely, constructive, and developmental guidance to support continuous learning and improvement.

Disclaimer

Throughout quality assurance processes we have ensured that this programme engages with and is aligned to:

- [Academic Regulations](#)
- [The University Skills Framework](#)
- [Welsh Language Policy](#)
- [Equality and Diversity Policy](#)
- [The Student Union offers support for students](#)

Section 3 – Programme set up (office use only)

3.1	Framework	FRAME043_SEP
3.2	Cost centre	GAME
3.3	Course type (HESA)	N/A
3.4	Fee model	Standard full time UG
3.5	Are any modules taught over either multiple periods or across the HESA year (defined as running 1st August - 31st July)	Yes
3.6	Student funding model	SLC/Self-Financed
3.7	Mode of Attendance (Funding)	In person attendance
3.8	Does the Suitability for Practice Procedure apply to the programme?	No
3.9	Programme Leader	Daniel Knox
3.10	Date of Approval	30/06/2026
3.11	Date and type of Revision	