Swansea University
Prifysgol Abertawe

FACULTY OF SCIENCE AND ENGINEERING

POSTGRADUATE TAUGHT STUDENT HANDBOOK

MSc (FHEQ LEVEL 7)

ELECTRONIC AND ELECTRICAL ENGINEERING WITH INDUSTRY DEGREE PROGRAMME

SUBJECT SPECIFIC
PART TWO OF TWO
MODULE AND COURSE STRUCTURE
2025-26

DISCLAIMER

The Faculty of Science and Engineering has made all reasonable efforts to ensure that the information contained within this publication is accurate and up-to-date when published but can accept no responsibility for any errors or omissions.

The Faculty of Science and Engineering reserves the right to revise, alter or discontinue degree programmes or modules and to amend regulations and procedures at any time, but every effort will be made to notify interested parties.

It should be noted that not every module listed in this handbook may be available every year, and changes may be made to the details of the modules. You are advised to contact the Faculty of Science and Engineering directly if you require further information.

IMPORTANT

Term Dates

The 25-26 academic year begins on 29 September 2025

Full term dates can be found here

Academic Integrity

Swansea University and the Faculty of Science of Engineering takes any form of **academic misconduct** very seriously. In order to maintain academic integrity and ensure that the quality of an Award from Swansea University is not diminished, it is important to ensure that all students are judged on their ability. No student should have an unfair advantage over another as a result of academic misconduct - whether this is in the form of **Plagiarism**, **Collusion** or **Commissioning**.

It is important that you are aware of the **guidelines** governing Academic Misconduct within the University/Faculty of Science and Engineering and the possible implications. The Faculty of Science and Engineering will not take intent into consideration and in relation to an allegation of academic misconduct - there can be no defence that the offence was committed unintentionally or accidentally.

Please ensure that you read the University webpages covering the topic – procedural guidance here and further information here. You should also read the Faculty Part One handbook fully, in particular the pages that concern Academic Misconduct/Academic Integrity.

The difference between compulsory and core modules

Compulsory modules must be **pursued** by a student.

Core modules must not only be **pursued**, but also **passed** before a student can proceed to the next level of study or qualify for an award. Failures in core modules must be redeemed.

Further information can be found under “Modular Terminology” on the following link - https://myuni.swansea.ac.uk/academic-life/academic-regulations/taught-guidance/essential-info-taught-students/your-programme-explained/

Key Programme Staff

Electronic and Electrical Engineering Programme Director	Electronic and Electrical Engineering with industry Year Coordinator
Dr Augustine Egwebe	Dr Thierry Maffeis

Supporting Your Studies

- Centre for Academic Success
- Faculty of Science and Engineering- Student Support

Supporting Your Professional Development

As a student studying MSc Electronic and Electrical Engineering at Swansea University, you are continuing your educational journey, which we hope will end with Engineering Council registration as a Chartered Engineer (CEng).

The Master of Science (MSc) programme in Electronic and Electrical Engineering has been accredited by the Institution of Engineering and Technology (IET) on behalf of the Engineering Council as meeting the requirements for Further Learning for registration as a Chartered Engineer (CEng). Candidates must hold a CEng-accredited BEng/BSc (Hons) undergraduate first degree to comply with full CEng registration requirements.

What this means for you is that the learning outcomes of each year of your programme of study have been carefully designed to align with Version 3 of the Engineering Council's Accreditation of Higher Education Programmes (AHEP), which forms the educational foundation for the UK Standard for Professional Engineering Competence (UK-SPEC).

The knowledge and skills you will have demonstrated by completing your programme of study are defined by achieving a set of learning outcomes distributed across the following key areas of competence:

- Science and mathematics
- Engineering analysis
- Design and innovation
- The engineer and society
- Engineering practice

To find out more about Professional Registration and what the AHEP competences are, please refer to the Engineering Council's Student Guide to Professional Registration and the Accreditation of Higher Education Programmes collated learning outcomes.

The IET – Your Professional Home for Life

As a student at Swansea University, you are privileged to be associated with one of the small groups of universities that have been selected to be Academic Partners of the IET. The most tangible benefit of this is that you can register as a student member of the IET at no cost to yourself for the duration of your study. And as a student member of the IET, you can take *full advantage* of the benefits that membership of the IET offers. These include an impressive range of services supporting *Networking*, *Professional Development*, *Learning Resources* and *Membership Benefits*. A summary of these is shown on the Get more from your partnership page.

As well as these benefits, as an Academic Partner of the IET, the University can offer you access to the IET's Graduate Advantage Scheme: that is, we will pay for your first year of full Membership of the IET, and you can use the post-nominals MIET straight after graduation for no cost. This will be especially useful as you start to gain and evidence the UK-SPEC competences you will need to complete your IEng or CEng professional registration.

IET on Campus

IET On Campus is designed to support everyone in the Department of Electronic and Electrical Engineering with students at the heart of it. The IET gives you access to tailored practical, technical, and career-related resources and helps you to create links with industry and other universities, building a platform for you to demonstrate your skills and raise your profile. At Swansea, the local branch of IET on Campus is run by the Electrical & Electronic Engineering Society (EEESoc) and is supported by the IET South Wales Local Network.

For more information, please join EEESoc and access their social media channels.

IET Student Advisor

Dr Karin Ennser (MIET, CEng) is the *IET Student Advisor* for Swansea University. Please get in touch with her if you want to find out more about the AHEP and UKSPEC, the IET, IET student membership, IET Scholarships, Graduate Advantage, IET Communities, or opportunities to get involved with Wales Southwest Local Network as an IET young professional volunteer. He will be happy to help.

Other members of staff associated with the IET at Swansea include:

- Dr Timothy Davies (MIET, CEng)
- Dr Augustine Egwebe (MIET)
- Prof Lijie Li (FIET)
- Mr David Moody (MIET)

UK Electronics Skills Foundation

Swansea University is an academic partner of the UK Electronics Skills Foundation (UKESF). The partnership means that you can benefit from the UKESF scholarship scheme, competitions, awards, and internship programme, which connects the most capable Electronics undergraduates with leading companies in the sector.

UKESF offers opportunities for undergraduates to take advantage of an industry placement, develop their employability skills, generous financial support, and the opportunity to network with professionals in the Electronics sector. Dr Karin Ennser is the *UKESF Student Advisor* for Swansea University. Please contact her if you want to find out more.

Faculty prizes

The Faculty of Science and Engineering awards graduation prizes to the best MSc Electronic and Electrical Engineering student in each graduating year.

2-year MScs with Industry - Student FAQs

1.Which courses will be offering 2-year MSc with Industry	a. MSc Electronic and Electrical Engineering with Industry b. MSc Materials Engineering with Industry c. MSc Mechanical Engineering with Industry d. MSc Computational Engineering with Industry e. MSc Civil Engineering with Industry f. MSc Structural Engineering with Industry g. MSc Power Engineering and Sustainable Energy with Industry
2. What is the Course break down:	

Year		Credits	Description
1	**Taught Modules**	120	As per existing MSc
1	**EG-M194 Preparatory Module**	0	EG-M194 MSc Industrial Preparation - A pre-placement module providing support and guidance.
2	**Module dissertation** EG-D05 EG-D06 EG-D03 EG-D04 EG-D12	60	Same as existing 1-year MSc dissertation. Deadline is September 30th, or if a student has resit examinations then the deadline extended to December 15th. **Please note an earlier deadline may apply – please see the module descriptor for more information**. Dissertation projects can be assigned before placements are secured so students may complete the two elements separately. If a placement is secured in time to undertake the dissertation and the industrial experience within the same placement then this will be possible.
2	**EG-M39 Industrial Experience Module**	60	32 weeks of industrial experience. This can either be with a paid industrial placement, or via an internal placement at the University. In some cases, the entire 32 weeks will be based at the University and in others it could be based entirely in Industry. All students placed in Industry will be under close guidance of academic staff at Swansea. The industrial experience module (EG-M39) will be assessed with two components on a pass / fail basis, and the learning outcomes and assessment will be closely linked to the requirements of professional engineering accreditation.
Total Credits 240			

3. Who will be providing support to me during my placement?	The academic coordinator of the 'with Industry' programme (Vasilios Samaras) will oversee the support and monitoring. They will also act as supervisor for the industrial experience module, and they guide students via weekly interactions. Attendance will be monitored by the academic supervisor, in conjunction with the placement company as relevant. UKVI requirements will be met with regular meetings with the supervisor (face to face). There will also be resource within Academic Registry to monitor the students in Year 2 to ensure UKVI compliance.
4. Are there any conditions for progression to Year 2?	To remain on the MSc with Industry, students will need to have successfully completed Part 1 (supplementary exams are permitted) and to have secured an appropriate placement(s). Any student who does not meet these criteria will be transferred to the normal one-year MSc.
5. What about my Visa?	Swansea University will support the application for a 2-year Visa.
6. What are the entry requirements	Entry requirements for the 2-year MSc schemes will be a 2:1 in a relevant degree (higher than the 1-year MSc entry requirement).
7. What is the application process?	Intake will be capped at 10 students per MSc and we are anticipating high demand. If we cannot offer the 2-year MSc we may be able to offer the existing 1-year MSc courses.
8. Will I be able to work alongside my study?	You will be able to work for 20 hours per week on top of the MSc.
9. How will I secure a placement?	Where possible, placements will be secured in advance of recruitment. Some placement opportunities will be available as students apply and competitive applications against these will take place. The remaining placement projects will need to be secured by students with support of University staff and this process will take place during October – June of the first year.
10. Is my placement guaranteed?	No - it is the responsibility of the student to secure a suitable placement with the assistance of University staff. Any student who does not meet these criteria will be transferred to the normal one-year MSc working to the same dissertation deadline as the 1-year MSc.

11. What is the course timeline?	**YEAR 1**	
	Sept – June	Year 1 Taught Modules (120 credits) and also alongside this MSc Industrial Experience Preparation module (EG-M194). The pre-placement sessions will take place to prepare you ahead of the placement and will cover academic requirements that you will have to fulfil during your time in industry.
	Oct – June	Process to apply for and secure placement/s (subject to successful completion of Part 1 in June)
	June/August	Exams (June first-sit and August supp exams) Check point for Part 1 completion. - If you've passed all modules (compensation permitted in programmes that have non-CORE module) - Board confirmation of completion of Part 1. - Board confirmation of placement secured. If both confirmed, then you can proceed to dissertation and placement year. If placement has not been secured, then you will be transferred to standard 1-year MSc and submit the dissertation in line with the deadline. If Part 1 is not completed due to academic failure, then you will fail the degree. You may be awarded a post-graduate certificate as an exit qualification.
	YEAR 2	
	June – Sept	Part A: Dissertation (60 credits): September submission: Learning outcomes and assessment as per 1-year MSc dissertation. Part B: Industrial experience - module EG-M39 (60 credits): 32 weeks of industrial experience EG-M39 assessment points (Three pass/fail components): 1 - Placement Report: The student is expected within the first few months of the placement to complete a report which includes an overview health and safety as well as your main responsibilities in the placement (December 20%) 2 - Final Placement Report: This report summarises the students year in industry placement/ project experience. The report will include a reflective section covering the student's role in the engineering placement / project, highlighting their personal initiative and their role in the evaluation of new engineering concepts (May 60%) - Recorded Presentation: Every student is expected to record and submit through Canvas a maximum 5-minutes PowerPoint presentation video summarising your MSc Year in Industry placement (May 20%)

13. What happens if I fail to complete Part 1 by June?	You will be entered in for supplementary examinations (resits) for the taught modules in August.
14. What happens if I fail to complete Part 1 following resits in August?	If you fail to pass all August resists, then you will fail the degree. You may be awarded a post-graduate certificate as an exit qualification.
12. What happens if I pass Part 1 but have not secured a suitable placement or project?	You will be transferred to the standard 1-year MSc Course and have until September to complete the dissertation. If you were required to undertake resit examinations the dissertation deadline will be moved on to December.
14. What happens if I fail any of Year 2 assessments	You will have one opportunity to repeat or resubmit assessment (capped at 50%). These must be completed by August of Year 2, so within the UKVI time allowance. If you fail any repeat / resubmission, then you will fail the degree and may be awarded a post-graduate certificate as an exit qualification.
15. What happens if I drop out of Year 2 at any point in Year 2?	Drop out will result in failure of the degree. You may be awarded a post-graduate certificate as an exit qualification. If student has valid extenuating circumstances Extensions may be applied / deferred fairly and extensions to UKVI time allowance will be sought on an individual basis
16. What if I don't complete the Industrial Module (EG-M39)?	Failure to complete the industrial experience module (EG-M39) will lead to failure of the degree, even if the dissertation module has been passed. After June of Year 1, there will be no scope to transfer from the 2-year MSc to the 1-year MSc equivalent.

MSc (FHEQ Level 7) 2025/26
Electronic and Electrical Engineering with Industry
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Compulsory Modules

Semester 1 Modules	Semester 2 Modules
AT-M80 **Optical Fibre Communications** **10 Credits** **Dr KM Ennser**	**AT-M76** **Radio and Optical Wireless Communications** **10 Credits** **Prof L Li/Prof A Mehta**
EGLM02 **Advanced Power Electronics and Drives** **10 Credits** **Dr Z Zhou**	**EG-M190** **Socio-Technical Engineering** **10 Credits** **Dr SA Rolland/Dr A Larimi**
EGNM04 **Nanoscale Structures and Devices** **10 Credits** **Dr TGG Maffeis/Prof KS Teng**	**EG-M47** **Business Leadership for Engineers** **10 Credits** **Dr JE Norambuena-Contreras/Dr Z Tehrani**
EGTM71 **Power Generation Systems** **10 Credits** **Prof I Masters** **CORE**	**EGLM06** **Sustainable Energy and Power Electronics Laboratory** **10 Credits** **Dr Z Zhou**
EGTM79 **Sustainability and Environmental Assessment** **10 Credits** **Prof GTM Bunting/Mr MH Green** **CORE**	**EGNM09** **Micro and Nano Electro-Mechanical Systems** **10 Credits** **Prof L Li**
EG-M194 **MSc Industrial Experience Preparation** **0 Credits** **Dr V Samaras**	
Dissertation	
EG-D05 **MSc Dissertation - Electrical Engineering** **60 Credits** **Dr M Fazeli** **CORE**	
EG-M39 **MSc Industrial Experience** **60 Credits** **Dr V Samaras/Dr J Clancy/Dr A Munnangi**	
Total 240 Credits	

Optional Modules

Choose exactly 10 credits

Choose exactly 10 credits from Options in TB1.

If the guidance notes apply please speak with the MSc Coordinator for advice.

EGLM00	Power Semiconductor Devices	Prof MR Jennings	TB1	10 (CORE)
EGLM07	Power Systems with Project	Dr M Fazeli	TB1	10 (CORE)

And

Choose exactly 10 credits

Choose exactly 10 credits from Options in TB2. If the guidance notes apply please speak with the MSc Coordinator for advice.

EGLM01	Wide band-gap Semiconductors	Prof OJ Guy	TB2	10 (CORE)
EGLM03	Modern Control Systems	Dr M Monfared	TB2	10 (CORE)
EGLM05	Advanced Power Systems	Dr M Fazeli	TB2	10 (CORE)