Swansea University
Prifysgol Abertawe

FACULTY OF SCIENCE AND ENGINEERING

POSTGRADUATE TAUGHT STUDENT HANDBOOK

MSc (FHEQ LEVEL 7)

COMPUTATIONAL ENGINEERING 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

Civil Engineering Programme Director	Computational Engineering Programme Director
Dr Will Bennett	Professor Rubén Sevilla

MSc (FHEQ Level 7) 2025/26
Computational Engineering
MSc Computational Engineering

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
CSCM445 Machine Learning 20 Credits Dr S Sharifzadeh/Dr LY Wu CORE	EG-M190 Socio-Technical Engineering 10 Credits Dr SA Rolland/Dr A Larimi CORE
EG-M23 Finite Element Computational Analysis 10 Credits Prof R Sevilla CORE	EGIM06 Advanced Fluid Flow Simulation 10 Credits Prof R Sevilla/Prof O Hassan CORE
EGIM02 Advanced Computational Methods for Engineers 10 Credits Dr F Zhao CORE	
Dissertation	
EG-D04 MSc Dissertation - Civil and Computational Engineering 60 Credits Dr J Clancy	
Total 180 Credits	

Optional Modules

Choose exactly 60 credits

EG-M07	Optimisation	Prof C Giannetti/Dr L Evans	TB2	10 (CORE)
EG-M325	Extended Research Case Study	Prof R Sevilla/ Refer To Dept	TB1+2	20 (CORE)
EGEM03	Continuum Mechanics	Prof D Peric	TB1	10 (CORE)
EGIM07	Dynamics and Earthquake Analysis of Structures	Prof Y Feng	TB1	10 (CORE)
EGIM08	Plasticity in Structural and Geotechnical Engineering	Prof D Peric	TB2	10 (CORE)

Or

Choose exactly 60 credits

CSCM072	Optimisation Techniques	Dr AAM Rahat/Dr S Qiu	TB1	20 (CORE)
CSCM435	Data Mining & Analytics	Dr S Yang	TB2	20 (CORE)
EG-M192	Research Case Study	Prof R Sevilla	TB2	10 (CORE)
EG-M83	Simulation Based Product Design	Dr AJ Williams/Dr B Morgan	TB2	10 (CORE)