



**Swansea University**  
**Prifysgol Abertawe**

# **FACULTY OF SCIENCE AND ENGINEERING**

## **POSTGRADUATE TAUGHT STUDENT HANDBOOK**

**MSc (FHEQ LEVEL 7)**

### **COMPUTATIONAL MECHANICS 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<br>Director | Computational Mechanics<br>Programme Director |
|---|---|
| Dr Will Bennett                         | Professor Rubén Sevilla                       |

**MSc (FHEQ Level 7) 2025/26**  
**Computational Mechanics**  
MSc Computational Mechanics

**Compulsory Modules**

| Semester 1 Modules  | Semester 2 Modules   |
|---|--|
| <a href="#"><u>EG-M23</u></a><br><b>Finite Element Computational Analysis</b><br>10 Credits<br>Prof R Sevilla<br>CORE       | <a href="#"><u>EG-M47</u></a><br><b>Business Leadership for Engineers</b><br>10 Credits<br>Dr JE Norambuena-Contreras/Dr Z Tehrani<br>CORE |
| <a href="#"><u>EGEM03</u></a><br><b>Continuum Mechanics</b><br>10 Credits<br>Prof D Peric<br>CORE                           | <a href="#"><u>EGIM06</u></a><br><b>Advanced Fluid Flow Simulation</b><br>10 Credits<br>Prof R Sevilla/Prof O Hassan<br>CORE               |
| <a href="#"><u>EGIM02</u></a><br><b>Advanced Computational Methods for Engineers</b><br>10 Credits<br>Dr F Zhao<br>CORE     |  |
| <a href="#"><u>EGIM07</u></a><br><b>Dynamics and Earthquake Analysis of Structures</b><br>10 Credits<br>Prof Y Feng<br>CORE |  |
| <b>Dissertation</b>   |  |
| <a href="#"><u>EG-M102</u></a><br><b>Industrial project</b><br>30 Credits<br>Prof R Sevilla/ Refer To Dept<br>CORE          |  |
| <b>Total 120 Credits</b>  |  |

**Optional Modules**

Choose exactly 20 credits

|                               |   |                             |     |              |
|-------------------------------|---|-----------------------------|-----|--------------|
| <a href="#"><u>EG-M07</u></a> | Optimisation  | Prof C Giannetti/Dr L Evans | TB2 | 10<br>(CORE) |
| <a href="#"><u>EGEM07</u></a> | Fluid-Structure Interaction                           | Prof WG Dettmer             | TB2 | 10<br>(CORE) |
| <a href="#"><u>EGIM08</u></a> | Plasticity in Structural and Geotechnical Engineering | Prof D Peric                | TB2 | 10<br>(CORE) |

**And**

Choose exactly 10 credits

|                                |   |                                 |       |              |
|--------------------------------|---|---------------------------------|-------|--------------|
| <a href="#"><u>EGIM10F</u></a> | Communications skills in a foreign language - French  | Prof R Sevilla/Prof AJ Rothwell | TB1   | 10<br>(CORE) |
| <a href="#"><u>EGIM10G</u></a> | Communications skills in a foreign language - German  | Prof R Sevilla/Prof AJ Rothwell | TB1+2 | 10<br>(CORE) |
| <a href="#"><u>EGIM10S</u></a> | Communications skills in a foreign language - Spanish | Prof R Sevilla/Mrs TA May       | TB1   | 10<br>(CORE) |