



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

**FACULTY OF SCIENCE AND  
ENGINEERING**

**POSTGRADUATE TAUGHT STUDENT  
HANDBOOK**

**MSC (FHEQ LEVEL 7)**

**ADVANCED COMPUTER  
SCIENCE**

**DEGREE PROGRAMMES**

**SUBJECT SPECIFIC  
PART TWO OF TWO  
MODULE AND COURSE STRUCTURE  
2024-25**

## **Welcome to the Faculty of Science and Engineering!**

Whether you are a new or a returning student, we could not be happier to be on this journey with you.

At Swansea University and in the Faculty of Science and Engineering, we believe in working in partnership with students. We work hard to break down barriers and value the contribution of everyone.

Our goal is an inclusive community where everyone is respected, and everyone's contributions are valued. Always feel free to talk to academic, technical and administrative staff, administrators - I'm sure you will find many friendly helping hands ready to assist you. And make the most of living and working alongside your fellow students.

During your time with us, please learn, create, collaborate, and most of all – enjoy yourself!

**Professor David Smith**  
**Pro-Vice-Chancellor and Executive Dean**  
**Faculty of Science and Engineering**



<b>Faculty of Science and Engineering</b>	
Pro-Vice-Chancellor and Executive Dean	Professor David Smith
Head of Operations	Mrs Ruth Bunting
Associate Dean – Education	Dr Laura Roberts
<b>School of Mathematics and Computer Science</b>	
Head of School	Elaine Crooks <a href="mailto:e.c.m.crooks@swansea.ac.uk">e.c.m.crooks@swansea.ac.uk</a>
School Education Lead	Dr Neal Harman <a href="mailto:n.a.harman@swansea.ac.uk">n.a.harman@swansea.ac.uk</a>
Head of Computer Science	Professor Jiaxiang Zhang <a href="mailto:jiaxiang.zhang@swansea.ac.uk">jiaxiang.zhang@swansea.ac.uk</a>
Computer Science Programme Director	Postgraduate Taught – Dr Bertie Müller <a href="mailto:Berndt.Muller@Swansea.ac.uk">Berndt.Muller@Swansea.ac.uk</a>
Year Coordinator	<p>Advanced Computer Science – Dr Anton Setzer <a href="mailto:a.g.setzer@swansea.ac.uk">a.g.setzer@swansea.ac.uk</a></p> <p>Advanced Software Technology – Dr Anton Setzer <a href="mailto:a.g.setzer@swansea.ac.uk">a.g.setzer@swansea.ac.uk</a></p> <p>Computer Science (MSc) – Dr Oliver Kullmann <a href="mailto:o.kullmann@swansea.ac.uk">o.kullmann@swansea.ac.uk</a></p> <p>Cyber Security – Dr Bertie Müller (Interim) <a href="mailto:Berndt.Muller@Swansea.ac.uk">Berndt.Muller@Swansea.ac.uk</a></p> <p>Data Science – Dr Alma Rahat <a href="mailto:a.a.m.rahat@swansea.ac.uk">a.a.m.rahat@swansea.ac.uk</a></p>

## **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.

## The 24-25 academic year begins on 23 September 2024

Full term dates can be found [here](#)

### **DATES OF 24-25 TERMS**

23 September 2024 – 13 December 2024

06 January 2025 – 11 April 2025

06 May 2025 – 06 June 2025

### **SEMESTER 1**

23 September 2024 – 27 January 2025

### **SEMESTER 2**

27 January 2025 – 06 June 2025

### **SUMMER**

09 June 2025 – 19 September 2025

## **IMPORTANT INFORMATION ON 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.

## STUDENT SUPPORT

The **Student Experience and Information Team** are here to support you through your studies and to provide non-judgemental advice and guidance. If you have any questions relating to your academic or personal life you can contact the Team and chat through your support options.

The Team is available for in-person support meetings and can also be contacted via email ([studentsupport-scienceengineering@swansea.ac.uk](mailto:studentsupport-scienceengineering@swansea.ac.uk)) or phone (**+44 (0) 1792 295514**). You can access their full contact details [here](#).

To visit the Team you can attend either of the following Receptions:

- Reception in the Foyer of Engineering Central, [Bay Campus](#)
- Reception on the first-floor landing of the Wallace Building, [Singleton Park Campus](#)

Standard Reception opening hours are Monday to Friday from 9am to 5pm however, this may vary outside of term time.

The current [FSE Student webpages](#) also contain useful information and links to additional resources:



## READING LISTS

Reading lists for each module are available on the course Canvas page and are also accessible via <http://ifindreading.swan.ac.uk/>.

We do not expect you to purchase textbooks, unless it is a specified key text for the course.

## 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/>

**MSc (FHEQ Level 7) 2024/25**  
**Advanced Computer Science**  
MSc Advanced Computer Science

**Compulsory Modules**

Semester 1 Modules	Semester 2 Modules
	<a href="#"><b>CSCM10</b></a> <b>Computer Science Project Research Methods</b> <b>15 Credits</b> <b>Dr MJ Roach</b>
<b>Dissertation</b>	
<b>CS-M20</b> <b>MSc Project</b> <b>60 Credits</b> <b>Dr U Berger</b> <b>CORE</b>	
<b>Total 180 Credits</b>	

**Optional Modules**

Choose exactly 60 credits

Graduates from our BSc programmes in Computer Science at Swansea University are usually not allowed to take modules of which they have already taken the level 3 version. The department aims to offer sufficient modules to allow a balanced choice of optional modules. In case of queries regarding the required modules for your scheme, please contact the course coordinator for the respective scheme.

<a href="#"><b>CSCM08</b></a>	Information Security Management	Dr B Muller	TB1	15
<a href="#"><b>CSCM13</b></a>	Critical Systems	Dr AG Setzer	TB1	15
<a href="#"><b>CSCM18</b></a>	IT-Security: Cryptography and Network Security	Dr M Tiwari/Dr E Neumann	TB1	15
<a href="#"><b>CSCM45</b></a>	Big Data and Machine Learning	Dr S Sharifzadeh	TB1	15
<a href="#"><b>CSCM68</b></a>	Embedded Systems Security	Dr H Nguyen/Prof SA Shaikh	TB1	15
<a href="#"><b>CSCM72</b></a>	Optimisation	Dr AAM Rahat	TB1	15
<a href="#"><b>CSCM85</b></a>	Modelling and Verification Techniques	Dr U Berger	TB1	15
<a href="#"><b>CSCM98</b></a>	Operating Systems and Architectures	Dr B Mora	TB1	15

**And**

Choose exactly 45 credits

<a href="#"><b>CSCM29</b></a>	Blockchain, Cryptocurrencies and Smart Contracts	Dr AG Setzer	TB2	15
<a href="#"><b>CSCM35</b></a>	Big Data and Data Mining	Dr S Yang	TB2	15
<a href="#"><b>CSCM37</b></a>	Data Visualisation	Dr B Mora/Dr JF Maestre Avila	TB2	15
<a href="#"><b>CSCM39</b></a>	Human Computer Interaction	Dr MI Ahmad	TB2	15
<a href="#"><b>CSCM77</b></a>	Computer Vision and Deep Learning	Dr LY Wu	TB2	15