



**Swansea University  
Prifysgol Abertawe**

**FACULTY OF SCIENCE AND  
ENGINEERING**

**UNDERGRADUATE STUDENT  
HANDBOOK**

**YEAR 2 (FHEQ LEVEL 5)**

**AEROSPACE ENGINEERING  
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 Aerospace, Civil, Electrical and Mechanical Engineering</b>	
Head of School	Professor Antonio Gil
School Education Lead	Professor Cris Arnold
Head of Aerospace Engineering	Professor Ben Evans
Aerospace Engineering Programme Director	Dr Nidhal Jamia - <a href="mailto:nidhal.jamia@swansea.ac.uk">nidhal.jamia@swansea.ac.uk</a>
Year Coordinator	Dr Nick Croft – <a href="mailto:t.n.croft@swansea.ac.uk">t.n.croft@swansea.ac.uk</a>

## **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](#)
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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/>

**Year 2 (FHEQ Level 5) 2024/25**  
**Aerospace Engineering**  
 MEng Aerospace Engineering[H403]  
 MEng Aerospace Engineering with a Year Abroad[H406]

**Compulsory Modules**

Semester 1 Modules	Semester 2 Modules
<a href="#">EG-261</a> Thermodynamics 2 10 Credits Dr RS Ransing CORE	<a href="#">EG-260</a> Dynamics 1 (Mech & Aero) 10 Credits Prof H Haddad Khodaparast CORE
<a href="#">EG-293</a> Aerodynamics 10 Credits Dr A Celik CORE	<a href="#">EG-263</a> Engineering Design 2 10 Credits Dr Y Xia CORE
<a href="#">EGA220</a> Aerospace Systems 10 Credits Dr MS Bonney CORE	<a href="#">EG-296</a> Flight Mechanics 10 Credits Prof WG Dettmer CORE
<a href="#">EGA228</a> Aerospace Control 10 Credits Dr M Jiffri CORE	
<a href="#">EG-2002</a> Aerospace Structures 20 Credits Dr AD Shaw/Prof JC Arnold	
<a href="#">EG-277</a> Research Project Preparation 0 Credits Dr AC Tappenden/Dr M Fazeli/Mrs KM Thomas	
<a href="#">EGA229</a> Experimental Studies - Aerospace 10 Credits Mr JK Mcfadzean/Prof JC Arnold/Dr A Coccarelli/Dr N Jamia/Dr Z Jelic CORE	
<a href="#">EGA230</a> Computer Aided Engineering (Aerospace) 10 Credits Dr MJ Clee/Dr X Zou CORE	
<b>Total 120 Credits</b>	

**Optional Modules**

Choose exactly 10 credits  
 Space Stream

<a href="#">EGA215</a>	Rocket and Space Technology	Dr I Sazonov	TB2	10 (CORE)
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**Or**

Choose exactly 10 credits  
 Structural/Computational Stream

<a href="#">EGA206</a>	Aerospace Structural Mechanics and Materials	Prof DJ Penney/Dr AS Ademiloye	TB2	10 (CORE)
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**Or**

Choose exactly 10 credits



Material/Propulsion Stream

<a href="#"><u>EG-213</u></a>	Mechanical Properties of Materials	Prof DJ Penney/Prof MT Whittaker	TB2	10 (CORE)
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**Year 2 (FHEQ Level 5) 2024/25**  
**Aerospace Engineering**  
 BEng Aerospace Engineering[H400,H405]

**Compulsory Modules**

Semester 1 Modules	Semester 2 Modules
<a href="#">EG-261</a> Thermodynamics 2 10 Credits Dr RS Ransing CORE	<a href="#">EG-260</a> Dynamics 1 (Mech & Aero) 10 Credits Prof H Haddad Khodaparast CORE
<a href="#">EG-293</a> Aerodynamics 10 Credits Dr A Celik CORE	<a href="#">EG-263</a> Engineering Design 2 10 Credits Dr Y Xia CORE
<a href="#">EGA220</a> Aerospace Systems 10 Credits Dr MS Bonney CORE	<a href="#">EG-296</a> Flight Mechanics 10 Credits Prof WG Dettmer CORE
<a href="#">EGA228</a> Aerospace Control 10 Credits Dr M Jiffri CORE	
<a href="#">EG-2002</a> Aerospace Structures 20 Credits Dr AD Shaw/Prof JC Arnold CORE	
<a href="#">EG-277</a> Research Project Preparation 0 Credits Dr AC Tappenden/Dr M Fazeli/Mrs KM Thomas	
<a href="#">EGA229</a> Experimental Studies - Aerospace 10 Credits Mr JK Mcfadzean/Prof JC Arnold/Dr A Coccarelli/Dr N Jamia/Dr Z Jelic CORE	
<a href="#">EGA230</a> Computer Aided Engineering (Aerospace) 10 Credits Dr MJ Clee/Dr X Zou CORE	
<b>Total 120 Credits</b>	

**Optional Modules**

Choose exactly 10 credits  
 Space Stream

<a href="#">EGA215</a>	Rocket and Space Technology	Dr I Sazonov	TB2	10 (CORE)
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**Or**

Choose exactly 10 credits  
 Structural/Computational Stream

<a href="#">EGA206</a>	Aerospace Structural Mechanics and Materials	Prof DJ Penney/Dr AS Ademiloye	TB2	10 (CORE)
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**Or**

Choose exactly 10 credits

Material/Propulsion Stream

<a href="#"><u>EG-213</u></a>	Mechanical Properties of Materials	Prof DJ Penney/Prof MT Whittaker	TB2	10 (CORE)
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**Year 2 (FHEQ Level 5) 2024/25**  
**Aerospace Engineering**  
 BEng Aerospace Engineering with a Year in Industry[H402]

**Compulsory Modules**

Semester 1 Modules	Semester 2 Modules
<a href="#">EG-261</a> Thermodynamics 2 10 Credits Dr RS Ransing CORE	<a href="#">EG-260</a> Dynamics 1 (Mech & Aero) 10 Credits Prof H Haddad Khodaparast CORE
<a href="#">EG-293</a> Aerodynamics 10 Credits Dr A Celik CORE	<a href="#">EG-263</a> Engineering Design 2 10 Credits Dr Y Xia CORE
<a href="#">EGA220</a> Aerospace Systems 10 Credits Dr MS Bonney CORE	<a href="#">EG-296</a> Flight Mechanics 10 Credits Prof WG Dettmer CORE
<a href="#">EGA228</a> Aerospace Control 10 Credits Dr M Jiffri CORE	
<a href="#">EG-2002</a> Aerospace Structures 20 Credits Dr AD Shaw/Prof JC Arnold CORE	
<a href="#">EG-233</a> Placement Preparation: Engineering Industrial Year 0 Credits Dr SA Rolland/Dr V Samaras	
<a href="#">EG-277</a> Research Project Preparation 0 Credits Dr AC Tappenden/Dr M Fazeli/Mrs KM Thomas	
<a href="#">EGA229</a> Experimental Studies - Aerospace 10 Credits Mr JK Mcfadzean/Prof JC Arnold/Dr A Coccarelli/Dr N Jamia/Dr Z Jelic CORE	
<a href="#">EGA230</a> Computer Aided Engineering (Aerospace) 10 Credits Dr MJ Clee/Dr X Zou CORE	
<b>Total 120 Credits</b>	

**Optional Modules**

Choose exactly 10 credits  
 Space Stream

<a href="#">EGA215</a>	Rocket and Space Technology	Dr I Sazonov	TB2	10 (CORE)
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**Or**

Choose exactly 10 credits  
 Structural/Computational Stream

<a href="#"><u>EGA206</u></a>	Aerospace Structural Mechanics and Materials	Prof DJ Penney/Dr AS Ademiloye	TB2	10 (CORE)
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**Or**

Choose exactly 10 credits

Material/Propulsion Stream

<a href="#"><u>EG-213</u></a>	Mechanical Properties of Materials	Prof DJ Penney/Prof MT Whittaker	TB2	10 (CORE)
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**Year 2 (FHEQ Level 5) 2024/25**  
**Aerospace Engineering**  
MEng Aerospace Engineering with a Year in Industry[H404]

**Compulsory Modules**

Semester 1 Modules	Semester 2 Modules
<a href="#">EG-261</a> Thermodynamics 2 10 Credits Dr RS Ransing CORE	<a href="#">EG-260</a> Dynamics 1 (Mech & Aero) 10 Credits Prof H Haddad Khodaparast CORE
<a href="#">EG-293</a> Aerodynamics 10 Credits Dr A Celik CORE	<a href="#">EG-263</a> Engineering Design 2 10 Credits Dr Y Xia CORE
<a href="#">EGA220</a> Aerospace Systems 10 Credits Dr MS Bonney CORE	<a href="#">EG-296</a> Flight Mechanics 10 Credits Prof WG Dettmer CORE
<a href="#">EGA228</a> Aerospace Control 10 Credits Dr M Jiffri CORE	
<a href="#">EG-2002</a> Aerospace Structures 20 Credits Dr AD Shaw/Prof JC Arnold	
<a href="#">EG-233</a> Placement Preparation: Engineering Industrial Year 0 Credits Dr SA Rolland/Dr V Samaras	
<a href="#">EG-277</a> Research Project Preparation 0 Credits Dr AC Tappenden/Dr M Fazeli/Mrs KM Thomas	
<a href="#">EGA229</a> Experimental Studies - Aerospace 10 Credits Mr JK Mcfadzean/Prof JC Arnold/Dr A Coccarelli/Dr N Jamia/Dr Z Jelic CORE	
<a href="#">EGA230</a> Computer Aided Engineering (Aerospace) 10 Credits Dr MJ Clee/Dr X Zou CORE	
<b>Total 120 Credits</b>	

**Optional Modules**

Choose exactly 10 credits  
Space Stream

<a href="#">EGA215</a>	Rocket and Space Technology	Dr I Sazonov	TB2	10 (CORE)
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**Or**

Choose exactly 10 credits  
Structural/Computational Stream

<a href="#">EGA206</a>	Aerospace Structural Mechanics and Materials	Prof DJ Penney/Dr AS Ademiloye	TB2	10 (CORE)
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**Or**

Choose exactly 10 credits  
Material/Propulsion Stream

<a href="#"><u>EG-213</u></a>	Mechanical Properties of Materials	Prof DJ Penney/Prof MT Whittaker	TB2	10 (CORE)
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**Year 2 (FHEQ Level 5) 2024/25**  
**Aerospace Engineering**  
 BEng Aerospace Engineering with a Year Abroad[H401]

**Compulsory Modules**

Semester 1 Modules	Semester 2 Modules
<a href="#">EG-261</a> Thermodynamics 2 10 Credits Dr RS Ransing CORE	<a href="#">EG-260</a> Dynamics 1 (Mech & Aero) 10 Credits Prof H Haddad Khodaparast CORE
<a href="#">EG-293</a> Aerodynamics 10 Credits Dr A Celik CORE	<a href="#">EG-263</a> Engineering Design 2 10 Credits Dr Y Xia CORE
<a href="#">EGA220</a> Aerospace Systems 10 Credits Dr MS Bonney CORE	<a href="#">EG-296</a> Flight Mechanics 10 Credits Prof WG Dettmer CORE
<a href="#">EGA228</a> Aerospace Control 10 Credits Dr M Jiffri CORE	
<a href="#">EG-2002</a> Aerospace Structures 20 Credits Dr AD Shaw/Prof JC Arnold	
<a href="#">EG-277</a> Research Project Preparation 0 Credits Dr AC Tappenden/Dr M Fazeli/Mrs KM Thomas	
<a href="#">EGA229</a> Experimental Studies - Aerospace 10 Credits Mr JK Mcfadzean/Prof JC Arnold/Dr A Coccarelli/Dr N Jamia/Dr Z Jelic CORE	
<a href="#">EGA230</a> Computer Aided Engineering (Aerospace) 10 Credits Dr MJ Clee/Dr X Zou CORE	
<b>Total 120 Credits</b>	

**Optional Modules**

Choose exactly 10 credits

<a href="#">EGA215</a>	Rocket and Space Technology	Dr I Sazonov	TB2	10 (CORE)
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Or

Choose exactly 10 credits

<a href="#">EGA206</a>	Aerospace Structural Mechanics and Materials	Prof DJ Penney/Dr AS Ademiloye	TB2	10 (CORE)
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Or

Choose exactly 10 credits

<a href="#">EG-213</a>	Mechanical Properties of Materials	Prof DJ Penney/Prof MT Whittaker	TB2	10 (CORE)
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