Swansea University
Prifysgol Abertawe

FACULTY OF SCIENCE AND ENGINEERING

UNDERGRADUATE STUDENT HANDBOOK

YEAR 3 (FHEQ LEVEL 6)

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

Faculty of Science and Engineering	
Pro-Vice-Chancellor and Executive Dean	Professor David Smith
Head of Operations	Mrs Ruth Bunting
Associate Dean – Education	Dr Laura Roberts
School of Aerospace, Civil, Electrical and Mechanical Engineering	
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 - nidhal.jamia@swansea.ac.uk
Year Coordinator	Dr Hadi Madinei – hadi.madinei@swansea.ac.uk

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) 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/

Year 3 (FHEQ Level 6) 2024/25
Aerospace Engineering
MEng Aerospace Engineering[H403]

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
EG-3081 **Rotorcraft Theory** **10 Credits** **Dr Y Yuan** **CORE**	**EG-397** **Propulsion** **10 Credits** **Prof MT Whittaker** **CORE**
EG-335 **Gas Dynamics** **10 Credits** **Dr I Sazonov** **CORE**	
EG-360 **Dynamics 2** **10 Credits** **Dr Y Yuan** **CORE**	
EG-3080 **Engineering Management (Aero, EEE, Mech)** **10 Credits** **Prof JC Arnold/Dr HKJ Jahanger/Dr EH Jewell/Mr JK Mcfadzean/Dr B Morgan** **CORE**	
EG-353 **Individual Engineering Project** **30 Credits** **Dr AC Tappenden/Dr M Fazeli/Prof PJ Holliman** **CORE**	
EGA302A **Aerospace Engineering Design 3** **20 Credits** **Mr JK Mcfadzean/Prof BJ Evans/Dr AD Shaw/Dr NV Taylor** **CORE**	
Total 120 Credits	

Optional Modules

Choose exactly 20 credits
Space Stream.

These options MUST be chosen by those on the Space Stream

EGA321	Satellite Systems	Dr I Sazonov	TB1	10 (CORE)
EGA341	Space Propulsion and Power Systems	Dr Z Jelic	TB2	10 (CORE)

Or

Choose exactly 20 credits
Structural/Computational Stream

These options MUST be chosen by those on the Structural/Computational Stream

EG-323	Finite Element Method	Dr W Harrison	TB1	10 (CORE)
EG-396	Computational Aerodynamics	Dr TN Croft	TB2	10 (CORE)

Or

Choose exactly 20 credits

Materials/Propulsion Stream.

These options MUST by chosen by those on the Materials/Propulsion Stream

EG-381	Fracture and Fatigue	Prof RE Johnston	TB1	10 (CORE)
EGA301	Composite Materials	Dr FA Korkees	TB2	10 (CORE)

Year 3 (FHEQ Level 6) 2024/25
Aerospace Engineering
MEng Aerospace Engineering with a Year Abroad[H406]

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
EG-3081 **Rotorcraft Theory** **10 Credits** **Dr Y Yuan** **CORE**	**EG-397** **Propulsion** **10 Credits** **Prof MT Whittaker** **CORE**
EG-335 **Gas Dynamics** **10 Credits** **Dr I Sazonov** **CORE**	
EG-360 **Dynamics 2** **10 Credits** **Dr Y Yuan** **CORE**	
EG-3080 **Engineering Management (Aero, EEE, Mech)** **10 Credits** **Prof JC Arnold/Dr HKJ Jahanger/Dr EH Jewell/Mr JK Mcfadzean/Dr B Morgan** **CORE**	
EG-353 **Individual Engineering Project** **30 Credits** **Dr AC Tappenden/Dr M Fazeli/Prof PJ Holliman** **CORE**	
EGA302A **Aerospace Engineering Design 3** **20 Credits** **Mr JK Mcfadzean/Prof BJ Evans/Dr AD Shaw/Dr NV Taylor** **CORE**	
Total 120 Credits	

Optional Modules

Choose exactly 20 credits
Space Stream.

These options MUST be chosen by those on the Space Stream.

EGA321	Satellite Systems	Dr I Sazonov	TB1	10 (CORE)
EGA341	Space Propulsion and Power Systems	Dr Z Jelic	TB2	10 (CORE)

Or

Choose exactly 20 credits
Structural/Computational Stream

These options MUST be chosen by those on the Structural/Computational Stream.

EG-323	Finite Element Method	Dr W Harrison	TB1	10
EG-396	Computational Aerodynamics	Dr TN Croft	TB2	10

Or

Choose exactly 20 credits
Materials/Propulsion Stream.

These options MUST by chosen by those on the Materials/Propulsion Stream.

EG-381	Fracture and Fatigue	Prof RE Johnston	TB1	10
EGA301	Composite Materials	Dr FA Korkees	TB2	10

Year 3 (FHEQ Level 6) 2024/25
Aerospace Engineering
BEng Aerospace Engineering[H405]

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
EG-3081 **Rotorcraft Theory** **10 Credits** **Dr Y Yuan** **CORE**	**EG-397** **Propulsion** **10 Credits** **Prof MT Whittaker** **CORE**
EG-335 **Gas Dynamics** **10 Credits** **Dr I Sazonov** **CORE**	
EG-360 **Dynamics 2** **10 Credits** **Dr Y Yuan** **CORE**	
EG-3080 **Engineering Management (Aero, EEE, Mech)** **10 Credits** **Prof JC Arnold/Dr HKJ Jahanger/Dr EH Jewell/Mr JK Mcfadzean/Dr B Morgan** **CORE**	
EG-353 **Individual Engineering Project** **30 Credits** **Dr AC Tappenden/Dr M Fazeli/Prof PJ Holliman** **CORE**	
EGA302A **Aerospace Engineering Design 3** **20 Credits** **Mr JK Mcfadzean/Prof BJ Evans/Dr AD Shaw/Dr NV Taylor** **CORE**	
Total 120 Credits	

Optional Modules

Choose exactly 20 credits
Space Stream

These options MUST be chosen by those on the space stream

EGA321	Satellite Systems	Dr I Sazonov	TB1	10 (CORE)
EGA341	Space Propulsion and Power Systems	Dr Z Jelic	TB2	10 (CORE)

Or

Choose exactly 20 credits
Structural/Computational Stream

These options MUST be chosen by those on the structural/computational stream

EG-323	Finite Element Method	Dr W Harrison	TB1	10 (CORE)
EG-396	Computational Aerodynamics	Dr TN Croft	TB2	10 (CORE)

Or

Choose exactly 20 credits

Materials/Propulsion Stream.

These options MUST by chosen by those on the Materials/Propulsion stream

EG-381	Fracture and Fatigue	Prof RE Johnston	TB1	10 (CORE)
EGA301	Composite Materials	Dr FA Korkees	TB2	10 (CORE)

Year 3 (FHEQ Level 6) 2024/25
Aerospace Engineering
BEng Aerospace Engineering with a Year in Industry[H402]

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
EG-3081 **Rotorcraft Theory** **10 Credits** **Dr Y Yuan** **CORE**	**EG-397** **Propulsion** **10 Credits** **Prof MT Whittaker** **CORE**
EG-335 **Gas Dynamics** **10 Credits** **Dr I Sazonov** **CORE**	
EG-360 **Dynamics 2** **10 Credits** **Dr Y Yuan** **CORE**	
EG-3080 **Engineering Management (Aero, EEE, Mech)** **10 Credits** **Prof JC Arnold/Dr HKJ Jahanger/Dr EH Jewell/Mr JK Mcfadzean/Dr B Morgan** **CORE**	
EG-353 **Individual Engineering Project** **30 Credits** **Dr AC Tappenden/Dr M Fazeli/Prof PJ Holliman** **CORE**	
EGA302A **Aerospace Engineering Design 3** **20 Credits** **Mr JK Mcfadzean/Prof BJ Evans/Dr AD Shaw/Dr NV Taylor** **CORE**	
Total 120 Credits	

Optional Modules
Choose exactly 20 credits
Space Stream.

These options MUST be chosen by those on the space stream

EGA321	Satellite Systems	Dr I Sazonov	TB1	10 (CORE)
EGA341	Space Propulsion and Power Systems	Dr Z Jelic	TB2	10 (CORE)

Or
Choose exactly 20 credits
Structural/Computational Stream

These options MUST be chosen by those on the structural/computational stream

EG-323	Finite Element Method	Dr W Harrison	TB1	10 (CORE)
EG-396	Computational Aerodynamics	Dr TN Croft	TB2	10 (CORE)

Or
Choose exactly 20 credits

Materials/Propulsion Stream.

These options MUST by chosen by those on the Materials/Propulsion Stream

EG-381	Fracture and Fatigue	Prof RE Johnston	TB1	10 (CORE)
EGA301	Composite Materials	Dr FA Korkees	TB2	10 (CORE)

Year 3 (FHEQ Level 6) 2024/25
Aerospace Engineering
MEng Aerospace Engineering with a Year in Industry[H404]

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
EG-3081 **Rotorcraft Theory** **10 Credits** **Dr Y Yuan** **CORE**	**EG-397** **Propulsion** **10 Credits** **Prof MT Whittaker** **CORE**
EG-335 **Gas Dynamics** **10 Credits** **Dr I Sazonov** **CORE**	
EG-360 **Dynamics 2** **10 Credits** **Dr Y Yuan** **CORE**	
EG-233 **Placement Preparation: Engineering Industrial Year** **0 Credits** **Dr SA Rolland/Dr V Samaras**	
EG-3080 **Engineering Management (Aero, EEE, Mech)** **10 Credits** **Prof JC Arnold/Dr HKJ Jahanger/Dr EH Jewell/Mr JK Mcfadzean/Dr B Morgan** **CORE**	
EG-353 **Individual Engineering Project** **30 Credits** **Dr AC Tappenden/Dr M Fazeli/Prof PJ Holliman** **CORE**	
EGA302A **Aerospace Engineering Design 3** **20 Credits** **Mr JK Mcfadzean/Prof BJ Evans/Dr AD Shaw/Dr NV Taylor** **CORE**	
Total 120 Credits	

Optional Modules

Choose exactly 20 credits
Space Stream.

These options MUST be chosen by those on the Space Stream.

EGA321	Satellite Systems	Dr I Sazonov	TB1	10
EGA341	Space Propulsion and Power Systems	Dr Z Jelic	TB2	10

Or

Choose exactly 20 credits
Structural/Computational Stream

These options MUST be chosen by those on the Structural/Computational Stream.

EG-323	Finite Element Method	Dr W Harrison	TB1	10
EG-396	Computational Aerodynamics	Dr TN Croft	TB2	10

Or
Choose exactly 20 credits
Materials/Propulsion Stream.

These options MUST by chosen by those on the Materials/Propulsion Stream.

EG-381	Fracture and Fatigue	Prof RE Johnston	TB1	10
EGA301	Composite Materials	Dr FA Korkees	TB2	10

Year 3 (FHEQ Level 6) 2024/25
Aerospace Engineering
BEng Aerospace Engineering with a Year Abroad[H401]

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
EG-3081 **Rotorcraft Theory** **10 Credits** **Dr Y Yuan** **CORE**	**EG-397** **Propulsion** **10 Credits** **Prof MT Whittaker** **CORE**
EG-335 **Gas Dynamics** **10 Credits** **Dr I Sazonov** **CORE**	
EG-360 **Dynamics 2** **10 Credits** **Dr Y Yuan** **CORE**	
EG-3080 **Engineering Management (Aero, EEE, Mech)** **10 Credits** **Prof JC Arnold/Dr HKJ Jahanger/Dr EH Jewell/Mr JK Mcfadzean/Dr B Morgan** **CORE**	
EG-353 **Individual Engineering Project** **30 Credits** **Dr AC Tappenden/Dr M Fazeli/Prof PJ Holliman** **CORE**	
EGA302A **Aerospace Engineering Design 3** **20 Credits** **Mr JK Mcfadzean/Prof BJ Evans/Dr AD Shaw/Dr NV Taylor** **CORE**	
Total 120 Credits	

Optional Modules

Choose exactly 20 credits

Space Stream. These options MUST be chosen by those on the Space Stream

EGA321	Satellite Systems	Dr I Sazonov	TB1	10 (CORE)
EGA341	Space Propulsion and Power Systems	Dr Z Jelic	TB2	10 (CORE)

Or

Choose exactly 20 credits

Structural/Computational Stream These options MUST be chosen by those on the Structural/Computational Stream

EG-323	Finite Element Method	Dr W Harrison	TB1	10 (CORE)
EG-396	Computational Aerodynamics	Dr TN Croft	TB2	10 (CORE)

Or

Choose exactly 20 credits

Materials/Propulsion Stream. These options MUST by chosen by those on the Materials/Propulsion Stream

EG-381	Fracture and Fatigue	Prof RE Johnston	TB1	10 (CORE)
EGA301	Composite Materials	Dr FA Korkees	TB2	10 (CORE)

Year 3 (FHEQ Level 6) 2024/25
Aerospace Engineering
BEng Aerospace Engineering[H400]

Compulsory Modules

Semester 1 Modules	Semester 2 Modules
EG-3081 **Rotorcraft Theory** **10 Credits** **Dr Y Yuan** **CORE**	**EG-397** **Propulsion** **10 Credits** **Prof MT Whittaker** **CORE**
EG-335 **Gas Dynamics** **10 Credits** **Dr I Sazonov** **CORE**	
EG-360 **Dynamics 2** **10 Credits** **Dr Y Yuan** **CORE**	
EG-3080 **Engineering Management (Aero, EEE, Mech)** **10 Credits** **Prof JC Arnold/Dr HKJ Jahanger/Dr EH Jewell/Mr JK Mcfadzean/Dr B Morgan** **CORE**	
EG-353 **Individual Engineering Project** **30 Credits** **Dr AC Tappenden/Dr M Fazeli/Prof PJ Holliman** **CORE**	
EGA302A **Aerospace Engineering Design 3** **20 Credits** **Mr JK Mcfadzean/Prof BJ Evans/Dr AD Shaw/Dr NV Taylor** **CORE**	
Total 120 Credits	

Optional Modules

Choose exactly 20 credits
Space Stream.

These options MUST be chosen by those on the Space Stream.

EGA321	Satellite Systems	Dr I Sazonov	TB1	10 (CORE)
EGA341	Space Propulsion and Power Systems	Dr Z Jelic	TB2	10 (CORE)

Or

Choose exactly 20 credits
Structural/Computational Stream

These options MUST be chosen by those on the Structural/Computational Stream.

EG-323	Finite Element Method	Dr W Harrison	TB1	10 (CORE)
EG-396	Computational Aerodynamics	Dr TN Croft	TB2	10 (CORE)

Or

Choose exactly 20 credits

Materials/Propulsion Stream.

These options MUST by chosen by those on the Materials/Propulsion Stream.

EG-381	Fracture and Fatigue	Prof RE Johnston	TB1	10 (CORE)
EGA301	Composite Materials	Dr FA Korkees	TB2	10 (CORE)