

Foundation Year Physics 22/23

Modules & Assessment

Trimesters 1 & 2

Foundation Physics A [*mechanics.matter.waves*]

Material will be selected from Sections of the main course book: A-Level Physics for AQA: Year 1 & 2 Student Book with Online Edition (2018).

- Section 4 – Mechanics, • Section 5 – Materials, • Section 8 – Thermal Physics
- Section 3 – Waves

Coursework: Core Physics A skills 1, 50%

Coursework: Core Physics A skills 2, 50%

Foundation Physics B [*electricity.fields.atoms*]

Material will be selected from Sections of the main course book: A-Level Physics for AQA: Year 1 & 2 Student Book with Online Edition (2018).

- Section 1 – Particles and Radiation, • Section 6 – Electricity, • Section 10 – Capacitors, • Section 2 – Electromagnetic Radiation and Quantum Phenomena,
- Section 9 – Gravitational and Electric Fields, • Section 12 – Nuclear Physics

Coursework: Core Physics B skills 1, 50%

Coursework: Core Physics B skills 2, 50%

Foundation Physics Laboratory † [*design.analysis.experiments*]

- Experimental Design
- Methods of Scientific Measurement
- Data Analysis and Errors
- Experiments covering: Mechanics, Thermal Physics, Electricity, and Waves

Coursework: Core Laboratory skills, 50%

Coursework: Laboratory Journal, 50%

Foundation IT and Study Skills [*careers.skills.exercises*]

- Seminar Series - Careers in Physics and Engineering
- IT Skills
- Presentation Skills
- Problem-based Learning Exercises

Coursework: Core Physics skills, 50%

Coursework: IT skills, 50%

† **For Mathematics with Foundation Year students only, the following module replaces Foundation Physics Laboratory:**

Introduction to Probability and Statistics [*probability.statistics.properties*]

- **Outline contents:** basic statistics and using “R programming language”
- Statistical graphs, confidence intervals. Probability properties, functions and graphs
- Combinatorics. Expectation and variance
- Hypothesis testing and comparisons of populations
- Central limit theorem. Nonparametric statistics

Coursework: Core skills 1, 50%

Coursework: Core skills 2, 50%

Trimester 1

Foundation Mathematics 1 [*algebra.geometry.matrices*]

- **Outline contents:** algebra, formulae and manipulation
- Functions, graphs and properties
- Trigonometry
- Co-ordinate systems, geometry and matrices

Coursework: Core Maths skills 1, 50%

Coursework: Core Maths skills 2, 50%

Trimester 2

Foundation Mathematics 2 [*vectors.calculus.series*]

- **Outline contents:** Vectors and complex numbers
- Introduction to calculus
- Differentiation of functions and rules of differentiation
- Integration of functions and rules of integration
- Sequences and series

Coursework: Core Maths skills 3, 50%

Coursework: Core Maths skills 4, 50%

Note on week numbers. Week numbering starts with Induction Week as week 0, and then Trimester 1 (T1) *teaching weeks* start with week 01. The *timetabling week* numbers then continue throughout the year, up to week 51 (including vacation weeks) – shown in brackets on next page. It is useful to list timetabling and teaching weeks – the latter such as in Trimester 2: T2-01 being the first teaching week of Trimester 2. *See the next pages for detailed breakdowns of dates and week numbering.*

<u>Week</u>	Week	<u>Assessment</u>
Trimester weeks	Timetable weeks	<u>TRIMESTER ONE (T1)</u>
T1-07	07	Foundation Mathematics 1. Core maths skills 1, 50% Due week T1-07 (07), Mon 31 Oct 2022
T1-12	12	Foundation IT and Study Skills. Core physics skills, 50% Due week T1-12 (12), Mon 05 Dec 2022 [Foundation Physics Laboratory. Core laboratory skills, 50% Due week T1-12 (12), Wed 07 Dec 2022 <u>OR</u> Introduction to Probability and Statistics. Core skills 1, 50% Due week T1-12 (12), Thur 08 Dec 2022]
T1-13	13	Foundation Physics A. Core physics A skills 1, 50% Due week T1-13 (13), Mon 12 Dec 2022 Foundation Physics B. Core physics B skills 1, 50% Due week T1-13 (13), Wed 14 Dec 2022 Foundation Mathematics 1. Core maths skills 2, 50% Due week T1-13 (13), Fri 16 Dec 2022
		<u>TRIMESTER TWO (T2)</u>
T2-07	24	Foundation Mathematics 2. Core maths skills 3, 50% Due week T2-07 (24), Fri 03 Mar 2023
T2-12	32	Foundation IT and Study Skills. IT skills, 50% Due week T2-12 (32), Mon 24 Apr 2023 [Foundation Physics Laboratory. Laboratory journal, 50% - due week T2-12 (32), Wed 26 Apr 2023 <u>OR</u> Introduction to Probability and Statistics. Core skills 2, 50% Due week T2-12 (32), Fri 28 Apr 2023]
T2-13	33	Foundation Physics A. Coursework: Core physics A skills 2, 50% Due week T2-13 (33), Tue 02 May 2023 Foundation Physics B. Coursework: Core physics B skills 2, 50% Due week T2-13 (33), Thur 04 May 2023 Foundation Mathematics 2. Core maths skills 4, 50% Due week T2-13 (33), Fri 05 May 2023

Academic Year by Week 2022/23 - with Foundation Year Assessments

week begins (Monday)	trimesters	timetable wk no	pool rooms bookable for teaching and revision
12 September 2022	<i>Welcome/Induction</i>	0	
19 September 2022	Trimester 1	1	✓
26 September 2022	Trimester 1	2	✓
3 October 2022	Trimester 1	3	✓
10 October 2022	Trimester 1	4	✓
17 October 2022	Trimester 1	5	✓
24 October 2022	Trimester 1	6	✓
31 October 2022	Trimester 1	7	✓
7 November 2022	Trimester 1	8	✓
14 November 2022	Trimester 1	9	✓
21 November 2022	Trimester 1	10	✓
28 November 2022	Trimester 1	11	✓
5 December 2022	Trimester 1	12	✓
12 December 2022	Trimester 1	13	✓
19 December 2022	<i>Christmas Vacation</i>	14	
26 December 2022	<i>Christmas Vacation</i>	15	
2 January 2023	<i>Christmas Vacation</i>	16	
9 January 2023	<i>Welcome/Induction</i>	17	
16 January 2023	Trimester 2	1	✓
23 January 2023	Trimester 2	2	✓
30 January 2023	Trimester 2	3	✓
6 February 2023	Trimester 2	4	✓
13 February 2023	Trimester 2	5	✓
20 February 2023	Trimester 2	6	✓
27 February 2023	Trimester 2	7	✓
6 March 2023	Trimester 2	8	✓
13 March 2023	Trimester 2	9	✓
20 March 2023	Trimester 2	10	✓
27 March 2023	<i>Easter Vacation</i>	28	
3 April 2023	<i>Easter Vacation</i>	29	(Bank Holiday Friday)
10 April 2023	<i>Easter Vacation</i>	30	(Bank Holiday Monday)
17 April 2023	Trimester 2	11	✓
24 April 2023	Trimester 2	12	✓
1 May 2023	Trimester 2	13	✓ (Bank Holiday Monday)
8 May 2023	<i>Inter-Tremerster Break</i>	34	
15 May 2023	<i>Inter-Tremerster Break</i>	35	
22 May 2023	<i>Inter-Tremerster Break</i>	36	
29 May 2023	<i>Welcome/Induction</i>	37	(Bank Holiday Monday)
5 June 2023	Trimester 3	1	✓
12 June 2023	Trimester 3	2	✓
19 June 2023	Trimester 3	3	✓
26 June 2023	Trimester 3	4	✓
3 July 2023	Trimester 3	5	✓
10 July 2023	Trimester 3	6	✓
17 July 2023	Trimester 3	7	✓
24 July 2023	Trimester 3	8	✓
31 July 2023	Trimester 3	9	✓
7 August 2023	Trimester 3	10	✓
14 August 2023	Trimester 3	11	✓
21 August 2023	Trimester 3	12	✓
28 August 2023	Trimester 3	13	✓ (Bank Holiday Monday)
4 September 2023			
11 September 2023	<i>Welcome/Induction</i>	0	

ASSESSMENTS

MATHS 1

SKILLS, LAB or P&STATS
FPA, FPB, MATHS 2

MATHS 3

SKILLS, LAB or P&S
FPA, FPB, MATHS 4

All events are subject to change

All teaching, revision and assessment shall take place within modules during the designated trimester periods. (Academic Regulations for Taught Programmes)