

Foundation Year Physics 19/20

Modules & Assessment

Semesters 1 & 2

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

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

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

Physics Portfolio-Coursework 50%
May Exam 50%

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

Material will be selected from Sections of the main course book: New 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

Physics Portfolio-Coursework 50%
May Exam 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

Physics Laboratory 50%
Formal Reports 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 100% (no exam)

† **For Mathematics and Financial Mathematics 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

Statistics Portfolio-Coursework 50%

May Exam 50%

Semester 1

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

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

Phase Tests 30%

January Exam 70%

Semester 2

Foundation Mathematics 2 [*calculus.complex.numbers*]

- Outline contents: introduction to calculus
- Differentiation of functions and rules of differentiation
- Integration of functions and rules of integration
- Applications of calculus
- Complex numbers

Phase Tests 30%

May Exam 70%

Exam Periods

Jan Exams Period:	Mon 06 Jan 2020 - Fri 17 Jan 2020
May Exams Period:	Mon 04 May 2020 - Fri 22 May 2020
Aug Resit Period:	Mon 17 Aug 2020 - Fri 04 Sept 2020