

Physics

Advanced Higher

Recommended Entry Requirements

A to C at
Higher
Physics

Progression through Physics

A pass at Advanced Higher leads to study at higher education in Physics or a related subject.



Course Content

Rotational motion and astrophysics

- kinematic relationships
- angular motion
- rotational dynamics
- gravitation
- general relativity
- stellar physics

Quanta and waves

- introduction to quantum theory
- particles from space
- simple harmonic motion
- waves
- interference
- polarisation

Electromagnetism

- fields
- circuits
- electromagnetic radiation

Units, prefixes and uncertainties

- units, prefixes and scientific notation
- uncertainties
- data analysis
- evaluation and significance of experimental uncertainties

Skills Developed

- extending and applying knowledge of physics to new situations, interpreting and analysing information to solve complex problems
- planning and designing physics experiments/investigations, using reference material and including risk assessments, to test a hypothesis or to illustrate particular effects
- carrying out complex experiments in physics safely, recording systematic detailed observations and collecting data
- selecting information from a variety of sources and presenting detailed information, appropriately, in a variety of forms
- processing and analysing physics data/information (using calculations, significant figures and units, where appropriate)
- making reasoned predictions from a range of evidence/information
- drawing valid conclusions and giving explanations supported by evidence/justification
- critically evaluating experimental procedures by identifying sources of uncertainty, suggesting and implementing improvements
- drawing on knowledge and understanding of physics to make accurate statements, describe complex information, provide detailed explanations and integrate knowledge
- communicating physics findings/information fully and effectively analysing and evaluating scientific publications and media reports

Assessment

Exam Paper 1
25 marks

Exam Paper 2
130

Practical Assignment
20 marks

Related Careers

A qualification in Physics can lead to careers in:

- flight
- engineering
- construction (electrician)
- scientific research
- architecture

Dara Ó Briain, Brian May, Albert Einstein and Stephen Hawking and Brian Cox all studied Physics!

