



# AS/A Level Physics A

(Available for teaching from September 2008)

**AS/A Level Physics A has been developed for students who wish to continue with a study of Physics after GCSE.** Some students may wish to follow a Physics course for only one year as an AS GCE, in order to broaden their curriculum. Others will continue their course for a further year extending their course to Advance GCE. Such a course will prepare students to progress into further education, to follow courses in Physics, Engineering, one of the other sciences or related subjects, or to enter employment where a knowledge of physics would be useful.



For assessment purposes, knowledge and understanding of key concepts are treated separately at AS; important links between different areas of physics are largely assessed synoptically at A2. While the teaching of practical skills may be integrated with the theoretical topics, they are assessed separately. This allows skills to be developed in a way suited to an individual centre.

## What are the benefits to me and my students of delivering this OCR specification?

- This redeveloped specification is based on consultation with QCA, senior OCR Physics examiners and a number of existing OCR customers.
- The first unit at AS has been designed so that candidates can sit the exam for the first time in January of year 12. Similarly the first A2 unit has been designed so that candidates can sit the exam for the first time in January of year 13.
- This specification has less emphasis on recall and more on understanding and application.
- There are no longer optional units within this specification but we have carefully chosen the best features and integrated them within the new units.
- Assessment outcomes are clear.
- Throughout the specification suitable practical work is suggested and the aspects of How Science Works covered are signposted.

## AS Level

Mandatory/Optional?	Unit title and description	Assessment method and weighting
Mandatory	<b>G481: Mechanics</b> <ul style="list-style-type: none"><li>• Motion</li><li>• Forces in action</li><li>• Work and energy</li></ul>	<b>1 hour written exam</b> AS Level – 30% A Level – 15%
Mandatory	<b>G482: Electrons, Waves and Photons</b> <ul style="list-style-type: none"><li>• Electric current</li><li>• Resistance</li><li>• DC Circuits</li><li>• Waves</li><li>• Quantum Physics</li></ul>	<b>1 hour 45 mins written exam</b> AS Level – 50% A Level – 25%
Mandatory	<b>G483: Practical Skills in Physics 1</b> Internal assessment of practical skills.	<b>Internal Assessment</b> AS Level – 20% A Level – 10%

## A2 Level

Mandatory/Optional?	Unit title and description	Assessment method and weighting
Mandatory	<b>G484: Newtonian World</b> <ul style="list-style-type: none"><li>• Newton's laws and momentum</li><li>• Circular motion and oscillations</li><li>• Thermal Physics</li></ul>	<b>1 hour written exam</b> A Level – 15%
Mandatory	<b>G485: Fields, Particles and Frontiers of Physics</b> <ul style="list-style-type: none"><li>• Electric and magnetic fields</li><li>• Capacitors and exponential decay</li><li>• Nuclear Physics</li><li>• Medical imaging</li><li>• Modelling the Universe</li></ul>	<b>1 hour 45 mins written exam</b> A Level – 25%
Mandatory	<b>G486: Practical Skills in Physics 2</b> Internal assessment of practical skills.	<b>Internal Assessment</b> A Level – 10%

### How is this qualification assessed?

There will be two written papers at both AS and A2 Level. There will be internal assessment of practical skills at both AS and A2 Level.

Internal assessment of practical skills is based on completing OCR set tasks. Each task is marked by the teacher using specific, OCR mark schemes.

Examination series are available every January and June.

Assessment of coursework will be available in June series only.

### Dates of first examinations

#### AS

First AS unit – January 2009  
All three AS units – June 2009

#### A2

First A2 unit – January 2010  
All three A2 units – June 2010

### What support will I receive?

#### Training

Introductory INSET will be available to support all teachers of this new specification.

#### Publishers

Developed in close consultation with OCR, Heinemann is publishing materials for the 2008 A Level Physics A specification.

#### Resources

You will be able to download all the following resources from the OCR website – [www.ocr.org.uk](http://www.ocr.org.uk).

- Sample Assessment Material
- Schemes of Work
- Coursework Guidance

For more information please contact the OCR Customer Contact Centre  
on **01223 553998**, or visit [www.ocr.org.uk](http://www.ocr.org.uk)