



# AS/A Level Physics B (Advancing Physics)

(Available for teaching from September 2008)

**The Advancing Physics course provides a distinctive structure within which candidates learn both about fundamental physical concepts and about physics in everyday and technological settings.** A primary aim of the course is to show how physics is practised and used today. Equally important, however, is to show the usefulness of the subject, and to illustrate the kind of impact which discoveries in physics have had on the way people live.



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

- This specification has been developed in consultation with the Institute of Physics.
- There is new material – simple, direct and rigorous approach to modern ideas.
- New perspectives – different angles on familiar topics.
- Opportunity and encouragement for teachers and candidates to select topics of interest for further individual study.
- Assessment methods that reflect and reward the teaching and learning styles encouraged by the course.
- Extensive support materials for both teachers and candidates; including appropriate software, providing a variety of learning activities.

## AS Level

Mandatory/Optional?	Unit title and description	Assessment method and weighting
Mandatory	<b>G491: Physics in Action</b> <ul style="list-style-type: none"><li>• Communication</li><li>• Designer materials</li></ul>	<b>1 hour written exam</b> AS Level – 30% A Level – 15%
Mandatory	<b>G492: Understanding Processes and Experimentation and Data Handling</b> <ul style="list-style-type: none"><li>• Waves and quantum behaviour</li><li>• Space, time and motion</li></ul>	<b>1 hour 45 mins written exam</b> AS Level – 50% A Level – 25%
Mandatory	<b>G493: Physics in Practice: Internal assessment of practical skills</b> <ul style="list-style-type: none"><li>• Quality of measurement</li><li>• Physics in use</li></ul>	<b>Internal Assessment</b> AS Level – 20% A Level – 10%

## A2 Level

Mandatory/Optional?	Unit title and description	Assessment method and weighting
Mandatory	<b>G494: Rise and Fall of the Clockwork Universe</b> <ul style="list-style-type: none"><li>• Models and rules</li><li>• Matters in extremes</li></ul>	<b>1 hour 15 mins written exam</b> A Level – 15%
Mandatory	<b>G495: Field and Particle Pictures</b> <ul style="list-style-type: none"><li>• Fields</li><li>• Fundamental particles</li></ul>	<b>2 hour written exam</b> A Level – 25%
Mandatory	<b>G496: Researching Physics: Internal assessment of practical skills</b> <ul style="list-style-type: none"><li>• Practical investigation</li><li>• Research briefing</li></ul>	<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.

Examination series are available every January and June. Assessment of coursework will be available in the 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.

The Institute of Physics offers training courses aimed at both teachers and technicians to support this specification.

#### Publishers

The Institute of Physics Publishing will publish resources to support this 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)