NATIONAL EXTENSION COLLEGE

Structured Fast Track

A level Physics

Course sample

www.nec.ac.uk

0800 389 2839

What can you expect when you enrol on an NEC course?

Access to our online learning platform

learn@nec is your gateway to the NEC community. As well as your course materials, you'll find additional resources to support your study, forums to connect to fellow NEC students, information about exams and assessment and ways for you to contact your tutor and the Student Support Team.

Learning materials written by subject experts

Our learning materials are written by subject experts and designed to cover the carefully selected awarding body specifications.

Tutor-marked assignments

Our tutors have demonstrated expert knowledge in their field, and will provide you with feedback on your assignments to help you progress through your course. Many of our tutors are examiners for the main awarding bodies so have experience of marking exam papers which helps them provide excellent feedback and support.

The online NEC platform is clear and uncomplicated and keeps your interest. You can keep a blog of your own learning diary and liaise with fellow students.

Helen

Superb organisation from signing up to getting results. High quality resources with well linked assignments.

Ceebee

So what will a course topic look like?

Course content

NEC's Structured Fast Track A level Physics course will follow the same topics as Pearson Edexcel's physics A level but has a set schedule, allowing you to complete the course within one academic year rather than two.

Section 1: Working as a physicist

Maths in physics

Quantities and units

Calipers and micrometers

Practical skills

Experiments with a spring

Experiments with a laser pointer and a CD

Section 2: Mechanics

Rectilinear motion

Momentum

Forces

Resolved forces and moments

Work, energy and power

Applied mechanics

Section 3: Electricity

Charge and current

Potential difference, electromotive force and power

Current-potential difference relationships

Resistance and resistivity

Internal resistance, series and parallel circuits and the potential divider

Section 4: Materials and vibrations

Fluids

Turbulence

Solid materials

Nature of waves

Section 5: Waves and the particle nature of light

Transmission and reflection of waves

The eye

The oscilloscope

Superposition of waves

Particle nature of light

Making a CD spectrometer

Section 6: Collisions, circular motion and oscillations

Momentum and energy

Motion in a circle

Oscillations

Section 7: Gravitational and electric fields

Universal gravitation

Electrical fields

Millikan's oil drop experiment

Capacitance

Touch screen technologies

Section 8: Magnetic fields and particle physics

Magnetic fields

Electrons and nuclei

Particle physics

Section 9: Thermodynamics

Specific heat capacity

Thermometry

Internal energy, absolute zero and change of state

Gas laws

Section 10: Nuclear decay and space

Nuclear decay

Detecting radiation

Cosmology

Astrophysics

Life cycle of a star

Want to continue?

Contact our Student Recruitment Team.

They can help you with finance options, any additional questions, and take you through the enrolment process when you are ready to proceed.

Helping you succeed

NEC students are eligible for a wide range of offers and additional support, helping you succeed during and after your studies with us:

- Additional services such as revision sessions and exam booking service
- 10% off the first year of undergraduate study with the Open University
- 10% off the first level of study with the Open College of the Arts
- TOTUM card, giving you discounts on everything from groceries to cinema tickets

Click here to return to the course page.

Contact us:
info@nec.ac.uk
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