

## Leaving Certificate Physics.

Physics is the study of matter and energy and the relationship between them.

Physicists are inquisitive people with a desire to try to discover the laws that govern the physical world. Famous physicists that you may have heard of are Galileo, Isaac Newton, Michael Faraday and Albert Einstein.

As a student of physics you will use special scientific equipment and apply theories to see how and why certain things happen, e.g. you will use voltmeters and ammeters to investigate the relationship between voltage and current in an electric circuit. You will use a spectrometer and sodium lamp to measure the wavelength of light.

Leaving Certificate physics involves the study of the following topics most of which you will have studied at junior certificate level.

*Light, speed, acceleration, force, energy, heat, waves, sound, static electricity, current electricity, magnetism, semiconductors, atomic physics and nuclear physics.*

There are 24 mandatory experiments to complete. These account for 30% of the written examination. The experiments are conducted and a written record is kept. The remaining 70% of the written examination involves theory, calculation and science, technology and society (STS). STS involves the application of physics to the real world, e.g. why a transformer is needed in a phone charger.

Mathematical calculations involving formulae are a requirement for leaving certificate physics. However, you do not have to be studying higher level mathematics in the leaving certificate to study higher level physics.

Physics is a good choice of subject if you are interested in studying physical science, computer science or engineering at third level. Some universities offer courses in experimental physics and separate courses in theoretical physics.

The following pages produced by the Institute of Physics contain information on the suitability of physics to your needs and a sample of the many career choices open to graduates with physics based degrees.

Physics involves theory and practice. There are 22 mandatory experiments to be carried out and a written record is kept. The physics laboratory is equipped with all the apparatus needed to do these experiments. Students work in small groups when doing experiments.

### Jobs for physicists

meteorologist  
climatologist  
environmental scientist  
astronomer  
nuclear physicist  
radiographer  
geophysicist  
air traffic controller  
electrical engineer  
instrumentation technician  
optometrist  
medical physicist  
computer game designer  
science journalist  
clinical scientist  
civil engineer  
architect  
sound engineer  
computer programmer  
mechanical engineer  
vehicle designer