

GCE AS & A LEVEL

Student Guide

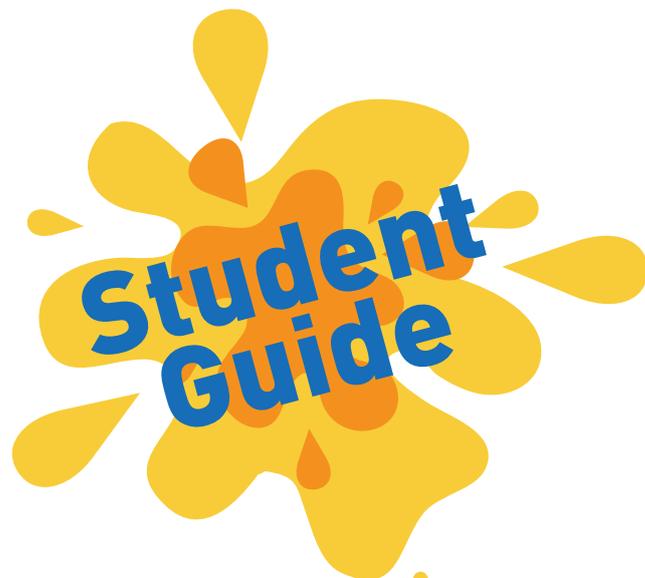
Environmental Technology

For first teaching from September 2013

For first award of AS Level in Summer 2014

For first award of A Level in Summer 2015

environmental technology



Student Guide: Environmental Technology

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With investment in low-carbon technologies and the green economy on the rise, employers will need a workforce with the right skills and knowledge to take advantage of this growth.

This GCE is fresh, contemporary and relevant to both students and employers. It is a science-based qualification, designed to enhance students' understanding of environmental and sustainability issues. It promotes the application of this knowledge in practical industry-based scenarios and assessment tasks.

Q. Why study Environmental Technology?

This science-based specification focuses on technological solutions to the energy and environmental problems facing the world today. It highlights the need to manage our planet's resources more effectively and explores how our society will make the transition to a more sustainable way of living.

This specification allows you to:

- develop your interest in science and technology along with an enthusiasm for environmental action;
- appreciate how science and technology can contribute towards a sustainable economy and society;

- develop your awareness of the complex interdependency between human populations and the environment on a local and global scale;
- understand the concept of sustainability and the role of environmental technology in society;
- apply your skills to relevant work-related scenarios;
- develop decision-making skills;
- research, develop and present your findings in a variety of formats;
- develop advanced study skills in preparation for third level education; and
- demonstrate your understanding and application of key concepts through challenging internal and external assessments.

Q. What will I study?

There are two units at AS and a further two units at A2:

Unit	Areas of Study	Unit	Areas of Study
AS 1: The Earth's Capacity to Support Human Activity	In this unit you will: <ul style="list-style-type: none"> • find out about the impact of declining fossil fuel supplies and options for reducing global dependency on crude oil; • examine the macrogeneration, distribution and storage of electricity from non-fossil fuel sources; • consider renewable energy technologies on a micro level; • discover the effects of fossil fuel use and the need to develop more sustainable sources of energy; • carry out practical activities in relation to aspects of three major renewable energy sources: wind, solar and biomass; and • take account of health and safety practices when carrying out practical work. 	AS 2: Internal Assessment – Renewable Energy Technologies	In this unit you will: <ul style="list-style-type: none"> • apply the knowledge and understanding that you gained in AS 1 to a practical context; • research renewable energy sources and evaluate the technical, environmental and economic aspects of the energy output from wind, solar and biomass; and • submit a technical report, relating to a realistic scenario task, in three sections: <ul style="list-style-type: none"> - desktop research; - practical investigation; and - discussion and recommendations.

Unit	Areas of Study	Unit	Areas of Study
A2 1: Building and Managing a Sustainable Future	In this unit you will: <ul style="list-style-type: none"> • examine a range of new and existing technologies and management systems that have the potential to support society's move toward a more sustainable way of living; • examine waste management processes (including bioremediation) and using low-carbon sources for society's transport needs; • investigate issues related to the environmental performance of buildings; and • explore the sustainable development needs of urban and rural communities; and take account of health and safety when carrying out all practical work. 	A2 2: Internal Assessment – Environmental Building Performance and Measurement	In this unit you will: <ul style="list-style-type: none"> • apply the knowledge and understanding gained in A2 1 to a practical context; • consider the sustainability performance of a building; and • apply the Code for Sustainable Homes (CSH) system to a specific construction.

Q. How will I be assessed?

Unit	Assessment	Weightings	Availability
AS 1: The Earth's Capacity to Support Human Activity	External written examination 1 hour 30 minutes	50% of AS 25% of A Level	Every Summer (beginning in 2014)
AS 2: Renewable Energy Technologies	Internal Assessment You will produce a technical report based on a realistic scenario relating to the use of renewable energy technologies Externally moderated	50% of AS 25% of A Level	Every Summer (beginning in 2014)
A2 1: Building and Managing a Sustainable Future	External written examination 2 hours	25% of A Level	Every Summer (beginning in 2015)
A2 2: Environmental Building Performance and Measurement	Internal Assessment You will produce a technical report relating to the environmental performance of a local building. Externally moderated	25% of A Level	Every Summer (beginning in 2015)

Q. What can I do with a qualification in Environmental Technology?

Environmental Technology will help you to make informed decisions and choices in everyday life. You can study Environmental Technology with a variety of other subjects. This can lead to a range of opportunities in higher education or a rewarding career.

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How can I find out more?

You can find out more about studying Environmental Technology by asking your careers advisor or the teachers at your school or college. You can also visit UCAS (www.ucas.com) or CAO (www.cao.ie) for details about entry requirements for university courses.

To view the full specification and the range of support material available for GCE Environmental Technology, please visit the microsite at www.ccea.org.uk

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