

Chemistry: Environmental Chemistry

A residential course for A-level students

This course sets out to inspire and challenge you in a non-competitive environment, mixing with like-minded students from across the UK and tutored by two subject experts. Participation can be acknowledged under *Preparation for HE* on your UCAS application form.

Objectives

- To gain an understanding of the chemical systems and processes that occur in our environment, for example in the atmosphere, the hydrosphere and the geosphere
- To explore our impact on some of the different aspects of this area of Chemistry, for example climate change, sustainability, pollution and geological hazards

Format

Seminars will be interactive and require active student participation and discussion of ideas. Students will work in small groups to solve questions and present answers to exercises.

There will be a guest speaker and a relevant visit.

Please see the sample programme overleaf although course content may change.

Tutors

Steve Campbell attained a 1st class BSc (hons) in Chemistry at Heriot-Watt University in Edinburgh, with an undergraduate project specialising in the formation of complex molecules in space. He has since completed a Masters at the University of Cambridge, and is currently in the penultimate year of his PhD at Cambridge. His research focusses on atmospheric chemistry, in particular components of the Earth's atmosphere that have adverse human health effects, as well as impacts on climate

Antoine Zenie completed his first degree in the Department of Chemical Engineering and Biotechnology at the University of Cambridge. He is co-founder of ULTRA IoT which is a startup developing modular IoT environmental and mobility smart city solutions.

Details

Date: Monday 11 to Friday 15 February 2019

Venue: The Cambridge Centre at Villiers Park, Foxton

Ref: Environmental Chemistry – 19S013

Cost: £325 to include accommodation, meals, course materials (students at fee paying schools will need to pay the full cost of £739)

Please complete the application form and return to Villiers Park by **Friday 14 December 2018**.

For more information contact us on 01223 872601 or vp@villierspark.org.uk

Environmental Chemistry

Day 1	1.00-1.30:	Arrivals
	2.00:	Welcome and Introduction to Villiers Park
	2.30:	Introduction to the Course
	3.00:	Climate Change in the Anthropocene
	4.15:	Free time
	5.15-6.45:	Preparation for Open Debate on Climate Change
	7.45:	Preparation for Debate
Day 2	9.15-10.45:	Environmental Engineering I
	11.15-12.45:	Open Debate: Climate Change
	2.00:	Stratospheric Chemistry and the Ozone Layer
	3.15:	Free time
	4.15:	Tropospheric Chemistry and Urban Pollution
	5.45-6.45:	Introduction to Group Presentations followed by Preparation
	7.45:	Film: <i>An Inconvenient Truth, A Global Warning</i>
Day 3	7.15:	Breakfast
	7.45:	Depart for Sizewell B Nuclear Power Station with packed
lunch	10.00:	Visit to Sizewell B with tour and talk
	2.00:	Depart for Villiers Park
	4.30:	Environmental Engineering II
	5.45-6.45:	Preparation for presentations
	7.45:	<i>Urban Air Quality Monitoring</i> – a presentation by Antoine Zenie, Co-Founder ULTRA IoT
Day 4	9.15-10.45:	Atmospheric Chemistry: Implications on Human Health
	11.15-12.45:	Toxicology of Harmful Substances
	2.00:	Group Exercises
	3.30:	Free time
	4.30:	Group Exercises
	5.45-6.45:	Anthropogenic Environmental Change
	7.45:	Preparation for Presentations
Day 5	9.15-10.45:	Final Preparation for Presentations
	11.15-12.45:	Group Presentations
	2.00:	Course Evaluation
	2.45:	Departures

Meals (unless otherwise stated):

Breakfast: 8.30am Coffee: 10.45am Lunch: 1.00pm

Dinner: 7.00pm