Biology: Ecology and Evolution

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 consider how organisms interact with one another and their physical environment
- To investigate how research has provided an understanding of the evolution of life on Earth and of natural processes that shape biodiversity
- To provide opportunities for students to develop their independent research and study skills in preparation for university level education

Format

- The course will be delivered using a variety of methods including; interactive lectures, group discussions, a guest speaker and an outside visit to a relevant organisation/institution. Topics may include; Ecosystems, Biodiversity, Molecular Ecology, Behavioural Ecology and Population Genetics.
- A central component will be to prepare a group presentation related to the course content

Please see the sample programme overleaf although course content may change

Tutors

Ellen Bell is currently undertaking a PhD in Biomolecular Sciences at UEA. She completed her BSc in Biology at the University of Nottingham and MSc in Aquatic Ecotoxicology at the University of Hull before working in the industrial sector as an Environmental Report Writer. Her current research is within Evolutionary Biology and focuses on immune gene diversity and parasite load in a group of neo-tropical catfishes.

Becky Lewis is also currently working on her PhD at UEA, following her masters' degree in Natural Sciences (also at UEA). Her PhD investigates how flour beetles adapt to higher temperatures, using experimental evolution techniques.

Details

Date: **Monday 3 to Friday 7 June 2019**

Venue: **The Cambridge Centre at Villiers Park, Foxton**

Ref: **Biology: Ecology and Evolution – 19S020**

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 5 April 2019.**
For more information contact us on 01223 872601 or vp@villierspark.org.uk

Biology: Ecology and Evolution

Day 1	1.00:	Arrivals
	1.30:	Lunch
	2.15:	Welcome and Introduction to Villiers Park
	2.45:	Introduction to Course and Projects
	3.45:	Free Time
	4.45:	How to Give a Presentation
	5.45:	The Logic of Science
	6.30-7.15:	University and Beyond: the Future is Exciting
	8.15:	*Epigenetics – why DNA isn't your destiny* – a talk by Dr Nessa Carey
Day 2	9.15-10.45:	Ecology, Evolution and Conservation
	11.15-12.45:	Molecular Ecology
	2.00:	Systematics
	3.00:	Ecological Practical 1
	5.00:	Free time
	5.30:	Introduction to the Natural History Museum
	6.00-7.15:	*Fruit Flies*, a talk by Dr Damian Smith, University of East Anglia
	8.15:	Film: *First Life* / Preparation for Presentations
Day 3	9.00:	Depart for visit to Natural History Museum, London with packed lunch
	11.00:	Natural History Museum - visits to Cocoon and Behind the Scenes
	3.00:	Depart for Villiers Park
	5.00:	Free time
	6.30-7.15:	Discussion Session
	8.15:	Science and Conservation - followed by discussion on the role of science in policy and decision making
Day 4	9.15-10.45:	Behavioural Ecology
	11.15-12.45:	Population Genetics
	2.00:	Interactive Population Genetics Session
	3.00:	Adapting to Extremes
	4.00:	Free time
	5.00:	Ecological Practical 2
	6.00-7.15:	Preparation for Group Presentations
	8.15:	Preparation for Group Presentations
Day 5	9.15-10.45:	Preparation for Group Presentations
	11.15-12.45:	Group Presentations
	2.00:	Course Evaluations
	2.45:	Departures

Meals (unless otherwise stated):
Breakfast - 8.30am; Coffee - 10.45am; Lunch - 1.00pm; Dinner - 7.00pm