

BIOL 2.16 – Tropical Research and Field Study module overview

Introduction

The School of Biology at Imperial College has joined with Operation Wallacea to provide the course “BIOL 2.16 - Tropical Research and Field Study”. This course combines the high academic standards of teaching and research of Imperial College with the expertise and facilities in tropical research provided by Operation Wallacea. The course is designed to allow students to join Operation Wallacea expeditions where they will receive extensive training in the habitat they choose to visit and then become an integral member of a tropical field research group. During the course the students will be assessed on their level of learning and have to demonstrate and apply many of the skills and knowledge they will learn during their time there. Prior to the expedition students will enrol at Imperial College online and gain access to teaching material and online resources from Imperial College Library. Then once the expedition is complete credit can be transferred from Imperial College to the students home University/College through existing or new affiliation arrangements.

Expedition Structure

Students undertaking Imperial College course BIOL 2.16 to gain Course Credit for their Operation Wallacea Expedition will join one of their research sites during the summer as a Research Assistant. Operation Wallacea expeditions operate on a weekly schedule with a variety of week long options from which students can choose from to build their own personalised expedition itineraries lasting from 4 to 8 weeks, students may design their expedition to cover certain interests or potential credit requirements by signing onto relevant options. Students signing on to receive course credit must complete 4 weeks of accredited options within their expedition to fulfil the course, additional time on expedition can be used to gain more experience but will not be assessed or used to gain additional credit. The week long options come in three categories;

Required Training Courses

This will usually be the first week of the expedition and comprise of a week long course offering training in the specific environment in which the student chooses to do their expedition. Required Training courses available are Jungle Training and Introduction to Forest Ecology in Indonesia, Honduras, and Guyana; Coral Reef Ecology Courses in Honduras, Indonesia, and Cuba; Bush Training and Savannah Ecology in South Africa, and Introduction to Amazonian Ecology and Conservation in Peru.

Additional Training Course

Many sites offer unique training opportunities that the students can join for a week to gain additional skills in general research or the specific environment they are in. These include the DNA analysis option in Honduras and Cultural Experiences in Honduras and Indonesia.

Research Projects

The main focus of Operation Wallacea is to conduct research into a wide variety of species and habitats at each site. Specific research groups focus in on each of these and students can join a group as a Research Assistant for a week at a time learning the specifics of research in that field.

The 4 weeks of accredited expedition has to include a Required Training Course and a minimum of two weeks on Research Projects. This means a student planning their 4 weeks of credit gaining options within their expedition can do either;

1 week of Required Training and 3 weeks on Research Projects

OR

1 week of Required Training, 1 week of Additional Training and 2 weeks on Research Projects.

Course Teaching Details and Credit Allocation

During the expedition the student will experience a huge range of teaching and experience gaining opportunities. The following is a break down of the weekly time allocation of scheduled participation, however while on site the student will essentially live full time in a genuine tropical research environment.

| | Frequency per week | Hours | Number of weeks | Total |
|-------------------|---------------------------|--------------|------------------------|------------------|
| Lectures | 8 | 1 | 1 | 8 |
| Seminars | 1 | 1 | 4 | 4 |
| Tutorials | 1 | 1 | 1 | 1 |
| Practicals | 6 | 8 | 4 | 192 |
| Total | | | | 205 Hours |

In addition to this time students will be expected to do considerable preparation work prior to the expedition in the form of a literature review.

The course is being offered as 20 Imperial College credits which translates to 7.5ECTS credits, however the actual allocation will be entirely down to each universities discretion.

Assessment Methods

The module comprises four assessment methods [total of 90 available marks]: A one-hour exam, a student assessment sheet to be completed by a member of the Operation Wallacea academic team, a field work journal and written assignment in the format of a research project proposal. The first three assessment methods are to be completed during the expedition. It is strongly advised that the literature review for the written assignment is completed prior to the start of the expedition. Subsequent sections of the proposal may be completed during the expedition and the completed proposal must be submitted the Imperial (see d below). *Imperial College students also give a 15 minute presentation on the work they conducted while on Operation Wallacea Field Course during the following Autumn Term* [10 additional marks available]. Imperial students are thus assessed out of a total achievable score of 100 marks, other students out of 90 marks (7.5 ECTS). Percentage marks awarded will be converted to the appropriate number of marks for each component.

a. Exam (maximum score = 15 marks)

Upon completion of the required training courses in the first week of the expedition, students will complete a 1-hour exam consisting of short answer questions based on the information relayed to students during this week. The exam will include questions relating to species identification, general ecology and research methods in the specific environment. The marked examination papers will be returned to Imperial for validation.

b. Student Performance Assessment (maximum score = 10 marks)

Students will complete a week of training followed by 3 weeks of biodiversity surveys or additional training courses. Consequently, students will work with a different academic team for each week of their expedition. At the end of each of these 3 weeks, the academic team leader will complete an assessment of the student's participation in data collection, their application of skills learned during the training week and their performance during the week. One form must be completed for each week of biodiversity surveys. If students chose to spend a week completing an additional training course (e.g. DNA extraction) then an assessment form must also be completed at the end of this week.

c. Field Work Journal (maximum score = 15 marks)

All students will be required to keep a Fieldwork Journal in a robust note pad. Students should complete this on a daily basis, and the text should be **strictly scientific and should detail the knowledge gained in terms of research methods, conservation issues learned, techniques used, and species seen**. This will be assessed by Operation Wallacea staff on site, signed off and the field Journal, together with the Student Performance Assessment sheet, will then be returned to Imperial for validation of the marks awarded.

d. Research Proposal (maximum score = 50 marks)

The written assignment consists of a 2000 word research proposal for a project designed to promote the conservation of specific taxa or habitat type within the ecosystem studied by the student during their expedition. The focus of this research proposal may be chosen from a selection of topic areas. It is expected that the title selected will focus on a specific element of research they will experience during their expedition (e.g. DNA application in conservation, herpetofauna conservation in the forests, coral reef fisheries protection).

Students should prepare the draft literature review component of their Research Proposal prior to joining the expedition and then add to this based on the knowledge they gain while in the field. This is particularly important as access to the scientific literature and to the internet in general may be extremely limited while on site.

The completed Research Proposal must be submitted to Imperial College module leader, Professor Denis Wright (d.wright@imperial.ac.uk) for assessment within 21 days of the end of an individual students expedition with OpWall. This is a purely theoretical project because students will not have time to complete the research while on site.

e. Presentation (maximum score = 10 marks) [**Students based at Imperial only**]

Contact

If you have any questions about the course or Operation Wallacea expeditions please email imperialcredit@opwall.com or phone the UK office on +44 (0)1790 763194.

More information is available on the website www.opwall.com/Universities/credits.shtml