Imperial College London

Programme Information		
Programme Title	Programme Code	HECoS Code
Research Methods in Ecology	C127	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
MSc	12 months	Full-time	Annually in October	90	180

Ownership			
Awarding Institution	Imperial College London	Faculty	Faculty of Natural Sciences
Teaching Institution	Imperial College London	Department	Life Sciences
Associateship	Diploma of Imperial College (DIC)	Main Location(s) of Study	Silwood Park Campus
External Reference			
Relevant QAA Benchmark Statement(s) and/or other external reference points		Master's Degree Characteristics	
FHEQ Level		Level 7	
EHEA Level		2nd Cycle	
External Accreditor(s) (if applicable)			
External Accreditor 1:	N/A		
Accreditation received:	N/A	Accreditation renewal:	N/A
Collaborative Provision			
Collaborative partner	Collaboration type	Agreement effective date	Agreement expiry date
N/A	N/A	N/A	N/A
Specification Details			
Programme Lead		Prof. Robert Ewers	
Student cohorts covered by specification		2023-24 entry	
Date of introduction of programme		October 22	
Date of programme specification/revision		August 23	

Programme Overview

Our diverse programme has a heavy emphasis on practicals and learning-through-research.

You will gain hands on experience in a wide suite of methods and skills used in ecological research. Your skills training will be embedded in the context of a broad set of real-world ecological questions from temperate and tropical biomes. Some coursework items will contribute to real-world ecological research projects, and you will have opportunity to be authors on formally published datasets.

During the varied coursework component, you will take part in six weeks of field-based research activities in the UK and in Malaysia. You will work in teams to develop meaningful hypotheses, and will have ample opportunities to design and implement field data collection to test them. Your field training will be accompanied by extensive laboratory and computing training, providing you with the tools you will need to manage, analyse and interpret ecological data.

Throughout the course, you will develop both hard and soft skill sets. Your training in field, laboratory and computing environments will introduce you to a wide suite of sensor technology, genomics, modern experimental methods, and data science and data management techniques. Simultaneously, you will be trained in soft skills including project planning, project management and logistics, teamwork, and communicating data.

You will be supported throughout the course by your peers, by research-active academics, Teaching Fellows, and Graduate Teaching Assistants. You will work in teams to develop and implement ecological projects, and the field course in Malaysia will embed you in an active global research network at the SAFE Project. Our course is nested within the Georgina Mace Centre for the Living Planet that promotes interdisciplinary research and partnerships, bringing together natural scientists, engineers, mathematicians, medics, economists and social scientists.

You will work with staff to develop your own ideas for an individual research project, which can be conducted on any ecological topic and in any ecosystem around the world. You will be encouraged to follow your interests, and we will work with you to find opportunities with researchers inside and outside of Imperial College London that match your personal career goals.

This course will teach you to think like a scientist through it's research-intensive, practical-focused curriculum. Our training is designed to help you develop personal attributes that are desired by employers, including time management, leadership, and problem-solving skills, along with understanding of research ethics and excellent written and data communication skills. All of the skills taught on this course are transferrable, meaning the course will open a wide set of opportunities for a career in science and in natural resource management. Many alumni use this course as a stepping stone to a PhD, while others have found employment opportunities as research assistants and technicians in academia and with NGOs, as rangers and site managers at government agencies and protected areas, and as science communicators and school teachers.

Learning Outcomes

Upon successful completion of this programme, you will be able to:
1. Critically evaluate the appropriate data collection and analysis techniques for addressing ecological questions and monitoring ecosystems
2. Recommend and implement appropriate sensor technology for collecting ecological data
3. Derive and justify meaningful hypotheses about ecological patterns and processes
4. Design sampling programmes and experiments to test ecological hypotheses and to monitor natural environments
5. Produce advanced analyses of ecological data
6. Interpret, summarise and communicate complex ecological data and data analyses
7. Develop, implement and present a programme of original research
8. Demonstrate project planning, project management, and leadership skills
9. Demonstrate independent critical thinking and broad knowledge of ecology
10. Demonstrate clarity in written communication and data presentation skills

The Imperial Graduate Attributes are a set of core competencies which we expect students to achieve through completion of any Imperial College degree programme. The Graduate Attributes are available at:
www.imperial.ac.uk/students/academic-support/graduate-attributes

Entry Requirements	
Academic Requirement	2:1 Bachelor's degree in a science-based subject. For further information on entry requirements, please go to www.imperial.ac.uk/study/apply/postgraduate-taught/entry-requirements/accepted-qualifications/
Non-academic Requirements	None
English Language Requirement	[Standard requirement (PG)](#) Please check for other [Accepted English Qualifications](#)
Admissions Test/Interview	N/A

The programme's competency standards documents can be found at: www.imperial.ac.uk/media/imperial-college/faculty-of-natural-sciences/department-of-life-sciences/public/postgraduate/masters/Life-Sciences-Competence-standards-PG.pdf

Learning & Teaching Approach

Teaching
You will be taught primarily through practical classes and fieldwork, supported by lectures, seminars, workshops, team-based learning and team-based problem-solving sessions. Teamwork will be in small groups of typically 3-6 people.

Independent learning
You will be expected to spend significant amounts of time working independently, outside of face-to-face contact time. This will typically include searching and reading the scientific literature, working on individual and group projects, and working on coursework assignments.

We will frequently use flipped teaching methods, meaning you will need to engage with online lecture materials, seminar recordings and readings in advance of attending timetabled sessions.

Research projects
You will spend half of the programme working on an individual research project, during which you will be embedded in a real research environment either within Imperial College London or with external research and academic organisations.

Field trips and fieldwork
You will take part in approximately four weeks of fieldwork in temperate forest and grasslands at Imperial College London's [Silwood Park Campus](#), and a further two weeks in tropical rainforest at the [SAFE Project](#) site in Sabah, Malaysia.

Overall Workload
Your overall workload consists of face-to-face sessions and independent learning. While your actual contact hours may vary, the following gives an indication of how much time you will need to allocate to different activities at each level of the programme. At Imperial, each ECTS credit taken equates to an expected total study time of 25 hours. Therefore, the expected total study time is 2250 hours per year.

Typically, you will spend in the order of 15 % of your time on lectures, practicals, fieldwork and similar (around 350 hours), and in the order of 85 % of your time on independent study.

Assessment Strategy

Assessment Methods

You will be assessed in a variety of ways designed to test different skills. These will include:

Written assessment
1. Posters
2. Project proposal
3. Research plan
4. Annotated dataset

5. Computing script
6. Written research reports

Oral assessment
7. Oral presentation
8. Oral project exam

The programme allows you to test your understanding of the subject informally before you complete the formal summative assessments that count towards your final mark. These summative assessments allow you to demonstrate that you have met the intended learning outcomes for each module, and contribute towards your achievement of the programme learning outcomes. There is formal summative assessment linked to each module.

Balance of assessment
The percentages below are based on a typical pathway through the course and are rounded to the nearest whole number. Roughly 22 % of the assessment is completed as teamwork.

	Year 1
Coursework	68 %
Practical	32 %
Examination	0 %

Coursework comprises any form of written assessment such as reports, computer scripts and datasets. Practicals comprise any piece of assessment which requires some sort of physical and/or oral aspect such as posters, oral presentations and vivas. Work conducted in the field and/or laboratory environments can be assessed as either coursework or practical.

Academic Feedback Policy

You will be provided with feedback in a number of formats, including:
1. Oral (e.g. face to face during or after in-person or online sessions)
2. Personal (e.g. discussions with staff and teaching assistants)
3. Interactive (e.g. team based learning, peer-to-peer evaluation, online quizzes)
4. Written (e.g. comments on work, model answers)

You will receive feedback on formative assessments and on summative coursework assessments. Feedback is intended to help you learn and you are encouraged to discuss it with the module leader and/or Programme Lead.

Feedback will be provided on coursework and practical assessments within two weeks of submission.

The College's Policy on Academic Feedback and guidance on issuing provisional marks to students is available at:
www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/

Re-sit Policy

The College's Policy on Re-sits is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/

Mitigating Circumstances Policy

The College's Policy on Mitigating Circumstances is available at:
www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/

Additional Programme Costs		
This section should outline any additional costs relevant to this programme which are not included in students' tuition fees.		
Description	Mandatory/Optional	Approximate cost
N/A	N/A	N/A

Important notice: The Programme Specifications are the result of a large curriculum and pedagogy reform implemented by the Department and supported by the Learning and Teaching Strategy of Imperial College London. The modules, structure and assessments presented in this Programme Specification are correct at time of publication but might change as a result of student and staff feedback and the introduction of new or innovative approaches to teaching and learning. You will be consulted and notified in a timely manner of any changes to this document.

Programme Structure[1]					
FHEQ Level 7 **You will study all core and compulsory modules.**					
Code	Module Title	Core/ Compulsory/ Elective	Group	Term	Credits
LIFE70009	Biological Computing	Core		Autumn-Spring	10
LIFE70047	Data Science	Compulsory		Spring	5
LIFE70048	Biodiversity	Core		Autumn	10
LIFE70044	Research Management	Compulsory		Autumn-Spring	10
LIFE70045	Sensor Technology	Core		Spring	10
LIFE70046	Research Project in Ecology	Core		Summer	45
				Credit Total	90

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[1] **Core** modules are those which serve a fundamental role within the curriculum, and for which achievement of the credits for that module is essential for the achievement of the target award. Core modules must therefore be taken and passed in order to achieve that named award. **Compulsory** modules are those which are designated as necessary to be taken as part of the programme syllabus. Compulsory modules can be compensated. **Elective** modules are those which are in the same subject area as the field of study and are offered to students in order to offer an element of choice in the curriculum and from which students are able to select. Elective modules can be compensated.

Progression and Classification

Award of a Masters Degree (including MRes)
To qualify for the award of a postgraduate degree you must have:
1. accumulated credit to the value of no fewer than 90 credits at level 7 or above of which no more than 15 credits may be from credit level 6;
2. and no more than 15 credits as a Compensated Pass;
3. met any specific requirements for an award as outlined in the approved programme specification for that award.

Classification of Postgraduate Taught Awards

The College sets the class of Degree that may be awarded as follows:
1. Distinction: 70.00% or above.
2. Merit: 60.00% or above but less than 70.00%.
3. Pass: 50.00% or above but less than 60.00%.

Your classification will be determined through the Programme Overall Weighted Average meeting the threshold for the relevant classification band.

Your degree algorithm provides an appropriate and reliable summary of your performance against the programme learning outcomes. It reflects the design, delivery, and structure of your programme without unduly over-emphasising particular aspects.

Programme Specific Regulations

N/A

Supporting Information
The Programme Handbook is available from the department.
The Module Handbook is available from the department.
The College's entry requirements for postgraduate programmes can be found at: www.imperial.ac.uk/study/pg/apply/requirements
The College's Quality & Enhancement Framework is available at: www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance
The College's Academic and Examination Regulations can be found at: www.imperial.ac.uk/about/governance/academic-governance/regulations
Imperial College is an independent corporation whose legal status derives from a Royal Charter granted under Letters Patent in 1907. In 2007 a Supplemental Charter and Statutes was granted by HM Queen Elizabeth II. This Supplemental Charter, which came into force on the date of the College's Centenary, 8th July 2007, established the College as a University with the name and style of "The Imperial College of Science, Technology and Medicine". www.imperial.ac.uk/admin-services/secretariat/college-governance/charters/
Imperial College London is regulated by the Office for Students (OfS) www.officeforstudents.org.uk/advice-and-guidance/the-register/
This document provides a definitive record of the main features of the programme and the learning outcomes that you may reasonably be expected to achieve and demonstrate if you take full advantage of the learning opportunities provided. This programme specification is primarily intended as a reference point for prospective and current students, academic and support staff involved in delivering the programme and enabling student development and achievement, for its assessment by internal and external examiners, and in subsequent monitoring and review.