Programme Information		
Programme Title	Programme Code	HECoS Code
Ecosystems and Environmental Change	C1G1	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
MRes	1 Calendar Year (12 months)	Full time	Annually in October	90	180
All students must apply to and join the MSc.					

Ownership			
Awarding Institution	Imperial College London	Faculty	Faculty of Natural Sciences
Teaching Institution	Imperial College London	Department	Life Sciences
Associateship	N/A	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	Dr. Cristina Banks-Leite
Student cohorts covered by specification	2022-23 entry
Date of introduction of programme	October 15
Date of programme specification/revision	October 22

Programme Overview

A key feature of this programme is that over *70% of your time will be spent on a single research project*. Through the compulsory training weeks you also will gain hands on experience in a wide suite of methods and skills used in ecology and environmental sciences, including data collection and statistical analyses, biological computing and Geographic Information System (GIS). You will also discuss in depth issues related to global changes and policy, as well as biogeochemical cycles, and the science behind climate change.

Your skills training will be embedded in the context of a broad set of real-world ecological questions from ecosystems around the world to lab experiments. Some coursework items will contribute to real-world ecological projects, and you will have opportunity to be authors on formally published datasets.

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. 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.
There is a huge variety of topics (and supervisors) to choose from, and potential topics range from theoretical and mathematical, to computationally intensive, to field-based and practical, and combinations of these; from atmospheric physics to vegetation science; from curiosity-driven, fundamental research on ecosystem function, to policy-oriented analysis of ecosystem and water resources management.

Moreover, you are not confined to studying the topics that supervisors have suggested. You are free to discuss possible topics with potential supervisors, who will be more than happy to help you to design the right project for your interests and aspirations. Many Masters projects are carried out at Silwood with a supervisor from another Department, and this is a feature appreciated by staff and students alike – an opportunity to develop new collaborations and strengthen existing ones, and make new interdisciplinary science happen.

Another key feature of the course is its emphasis on wider relevance, and communication with a non-scientific audience. It's impossible to be seriously involved in ecosystem science, and especially the science of environmental change, without recognizing the human and policy dimensions of the subject and the importance of careful communication – for example, distinguishing policy-relevant scientific information (what science really 'says') from policy prescription. Recognizing that communication with a wider audience is a necessary and specialized skill, and that a broad understanding of the social and policy context is essential background for future practitioners and researchers, the eeChange Masters includes components designed to sharpen your faculties in these areas. There are group mini-projects to summarize information on various topics for a non-scientific audience, and a module in the social and policy context of environmental change.

Many alumni use this course as a stepping stone to a PhD, as the longer length of the research project enables a greater exploration of analyses and results, which may result in a scientific publication. However, others have moved on to work at NGOs, government agencies, research assistants and teaching.

Learning Outcomes

Upon successful completion of this module, you will be able to:

1. Justify an ecological question and/or hypothesis
2. Devise an appropriate research plan to address/test that question/hypothesis
3. Evaluate competing methods for collecting biodiversity data
4. Collect and/or generate data and analyse results in the field of ecology
5. Create scientific figures and maps
6. Implement data science techniques to better understand ecology, evolution and conservation
7. Interpret your project data and results in the context of published research in the field
8. Demonstrate independent critical thinking and broad knowledge of ecology
9. Communicate scientific results to stakeholders and policy managers

10. Communicate your independent project in both oral and written form

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/pg/apply/requirements/pgacademic
Non-academic Requirements	None
English Language Requirement	Standard requirement (PG) Please check for other Accepted English Qualifications
Admissions Test/Interview	None

The programme's competency standards documents can be found at: http://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

Learning and Teaching Delivery Methods

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 over 70% 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.

Please refer to the Teaching Toolkit for advice on learning and teaching approaches: www.imperial.ac.uk/staff/educational-development/teaching-toolkit

Overall Workload
Your overall workload consists of face-to-face sessions and independent learning. While your actual contact hours may vary according to the optional modules you choose to study, 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 10 % of your time on lectures, practicals, fieldwork and similar (around 350 hours), and in the order of 90 % 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. POSTnote report
2. Science communication exercise
3. Research Project

Oral assessment

4. POSTnote presentation
5. Oral presentation
6. Project vivas

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.

	Year 1
Coursework	30 %
Research Project	42 %
Practical	7%
Oral examinations	21 %

Coursework comprises the POSTnote wrriten report and presentation, and the science communication exercise. Research project includes mark on the dissertation given by two examiners. Practical refers to the mark given on lab performance by the supervisor. Oral presentation includes both presentation of research project and viva.

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)
4. Written (e.g. comments on work, model answers)

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/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/

Mitigating Circumstances Policy

The College's Policy on Mitigating Circumstances is available at: www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/

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]					
Year 1 - FHEQ Level 7 **Students study all core modules.**					
Code	Module Title	Core/ Elective	Group	Term	Credits
LIFE70028	Global Change and Policy	Core		1	15
LIFE70029	Core Skills	Core		1,2	15
LIFE70030	Research Project in Ecosystems and Environmental Change	Core		2,3	60
				Credit Total	90

[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 and Classification for Postgraduate Students

Award of a Postgraduate Degree (including MRes)
To qualify for the award of a postgraduate degree a student 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: The student has achieved an overall weighted average of 70.00% or above across the programme.
2. Merit: The student has achieved an overall weighted average of above 60.00% but less than 70.00%.
3. Pass: The student has achieved an overall weighted average of 50.00% but less than 60.00%.

a. For a Masters, students must normally achieve a distinction (70.00%) mark in the dissertation or designated final major project (as designated in the programme specification) in order to be awarded a distinction.
b. For a Masters, students must normally achieve a minimum of a merit (60.00%) mark in the dissertation or designated final major project (as designated in the programme specification) in order to be awarded a merit
c. Modules taken at level 6 as part of the programme specification for a named postgraduate award will contribute to the determination of pass, merit or distinction for any taught postgraduate award and are included in the calculation of the overall weighted average.

Programme Specific Regulations

N/A

Supporting Information
The Programme Handbook is available at: TBA
The Module Handbook is available at: TBA
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 a typical student may reasonably be expected to achieve and demonstrate if s/he takes 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.

Modification			
Description	**Approved**	**Date**	**Paper Reference**
Curriculum Review	Programmes Committee	22/03/22	PC.2021.66