

**MRes Ecosystems and Environmental Change**

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 intended as a reference point for prospective students, current students, external examiners and academic and support staff involved in delivering the programme and enabling student development and achievement.

**Programme Information**

Programme Title	Ecosystems and Environmental Change			
Award(s)	MRes			
Programme Code	C1G1 (1YFT)	C1G124 (2YPT)		
Associateship	None			
Awarding Institution	Imperial College London			
Teaching Institution	Imperial College London			
Faculty	Faculty of Natural Sciences			
Department	Department of Life Sciences			
Mode and Period of Study	1 academic year, full-time or 2 academic years, part-time			
Cohort Entry Points	Annually in October			
Relevant <a href="#">QAA Benchmark Statement(s)</a> and/or other external reference points	<a href="#">Master's Degree Characteristics</a>			
Total Credits	ECTS:	90	CATS:	180
<a href="#">FHEQ Level</a>	Level 7			
<a href="#">EHEA Level</a>	2 <sup>nd</sup> cycle			
External Accreditor(s)	None			
<b>Specification Details</b>				
Student cohorts covered by specification	2016/17 entry			
Person responsible for the specification	Professor Iain Colin Prentice			
Date of introduction of programme	October 2015			
Date of programme specification/revision	January 2017			

## Description of Programme Contents

This cutting-edge interdisciplinary programme, which covers the physical, life and social sciences, is designed to develop the solid theoretical grounding, skills and real-world experience that employers are looking for. It also provides an understanding of how to ensure that research has real-world impact. This will best prepare students for a career in research and possible PhD studies.

This MRes is offered as a 12-month full-time programme, or a two-year part time option, which may particularly appeal to those candidates already in employment in a relevant field.

Graduates of this course are ideally placed to work for large international or small local NGOs, contribute to the work of international organisations such as the UN and World Bank, or advise government policy.

Many graduates may aspire to continuing within academia after graduation, and will find that this MRes will set them apart from other PhD candidates.

## Learning Outcomes

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](http://www.imperial.ac.uk/students/academic-support/graduate-attributes)

### 1. Knowledge and Understanding

#### Knowledge and Understanding of:

- The human-environment linkage and the fundamental drivers of biodiversity loss, both human and biological.
- Techniques in environmental science; the main tools for addressing grand challenges in ecosystems and the environment, from data collection to statistical analysis and mathematical modelling, and conversion to policy advice.
- Key issues in ecosystems and global change science, covering the fundamental underlying science through to policy intervention.
- The role of science in national and international policy for the environment, and means by which policy action can be brought about.
- Research techniques, including information retrieval, experimental design and statistics, modelling, sampling, field safety, analysis and presentation of results.
- Transferable skills including problem definition, project design, preparation of grant proposals, teamwork, written, poster and oral reports, scientific publications.

### 2. Skills and other Attributes

#### Intellectual Skills

- Analyse and solve problems in ecosystem and global change research using an integrated multidisciplinary approach.
- Integrate and evaluate information.
- Formulate hypotheses, collect appropriate data to test them, and analyse the data appropriately.
- Devise and use appropriate modelling and decision support tools in order to translate scientific understanding into appropriate policy action.

- Plan, conduct and write up a programme of original research.

### Practical Skills

- Plan and safely execute field-based data collection.
- Use computational tools and packages.
- Analyse scientific results and determine their strength and validity.
- Prepare grant proposals.
- Give oral presentations.
- Prepare a poster suitable for a scientific conference.
- Write concisely and effectively for a scientific and a lay audience.
- Use the scientific literature effectively.

### Professional Skills Development

- Communicate effectively through oral presentations, written reports, posters and scientific publications.
- Apply statistical and modelling skills to understand and interpret quantitative analyses.
- Demonstrate management skills: decision making, problem definition, project design and evaluation, risk management, teamwork and coordination.
- Integrate and evaluate information from a variety of sources.
- Transfer techniques and solutions from one discipline to another.
- Use Information and Communications Technology.
- Manage resources and time.
- Learn independently with open-mindedness and critical enquiry.
- Learn effectively for the purpose of continuing professional development.

### Entry Requirements

Academic Requirement	2.1 Honours degree in a science-based subject.
Non-academic Requirements	Ideally, experience in environmental research or policy, and a strong interest in following a research career in this field.
English Language Requirement	<a href="#">Standard requirement</a>

The programme's competency standards document 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 Strategy

Scheduled Learning & Teaching Methods	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Group discussions</li> <li>• Seminars</li> <li>• Practical classes and field work</li> <li>• Group work exercises</li> <li>• Formal and informal presentations</li> </ul>
E-learning & Blended Learning Methods	<ul style="list-style-type: none"> <li>• Computer-based work</li> <li>• Online lecture materials</li> </ul>

Project and Placement Learning Methods	<ul style="list-style-type: none"> <li>• Individual research project and dissertation (8 months), which can include placements</li> </ul>
<b>Assessment Strategy</b>	
Assessment Methods	<ul style="list-style-type: none"> <li>• Coursework</li> <li>• Presentations</li> <li>• Dissertation</li> <li>• Briefing paper</li> <li>• Viva</li> </ul>
<b>Academic Feedback Policy</b>	
<p>Coursework is double-marked and comments by the markers annotated directly on the papers (electronically for submissions on blackboard). A summary of the feedback (with tickboxes indicating relative attainment on key dimensions) will be completed, and an indicative grade will be given (actual marks will not be communicated to the students). These papers will then be returned to the students as soon as possible and within two weeks of submission. A meeting will be held after the end of the taught component, at which each student will have a one- to-one discussion with the Course Director on progress to date, coursework marks achieved and expectations for the project.</p> <p>Staff-student meetings are held termly to communicate general feedback between student representatives and the course directors. Additional meetings are held to provide general feedback and guidance e.g. on exam performance and project selection.</p> <p>Dissertations are marked by the supervisor and two independent assessors, who provide feedback electronically that is returned automatically to students after the final examiners meeting.</p>	
<b>Re-sit Policy</b>	
<p>The College's Policy on Re-sits is available at: <a href="http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/resitting-examinations/">http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/resitting-examinations/</a></p>	
<b>Mitigating Circumstances Policy</b>	
<p>The College's Policy on Mitigating Circumstances is available at: <a href="http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/mitigating-circumstances/">http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/mitigating-circumstances/</a></p>	

<b>Assessment Dates &amp; Deadlines</b>	
Coursework Deadlines	Autumn, Summer
Project Deadline	Summer
<b>Assessment Structure</b>	
Marking Scheme	

**Pass:**

- The Pass Mark is 50%. Students must pass all elements in order to be awarded a degree.

**Merit:**

- In order to be awarded a result of merit, a candidate must obtain a mark of 60% or greater in each element.
- Where appropriate, a Board of Examiners may award a result of merit where a candidate has achieved an aggregate mark of 60% or greater across the programme as a whole AND has obtained a mark of 60% or greater in each element with the exception of one element AND has obtained a mark of 50% or greater in this latter element.

**Distinction:**

- In order to be awarded a result of distinction, a candidate must obtain a mark of 70% or greater in each element;
- Where appropriate, a Board of Examiners may award a result of distinction where a candidate has achieved an aggregate mark of 70% or greater across the programme as a whole AND has obtained a mark of 70% or greater in each element with the exception of one element AND has obtained a mark of 60% or greater in this latter element.

**Assessment Weightings**

Element (% Weighting)	Item	% Item Weighting
Coursework (25%)	Practical analysis and writing exercise	12.5%
	Scientific communication assignment	12.5%
Project (75%)	Dissertation	60%
	Briefing paper	10%
	Oral examination	5%

Indicative Module List											
Code	Title	Core/ Elective	L&T Hours	Ind. Study Hours	Place- ment Hours	Total Hours	% Written Exam	% Course- work	% Practical	FHEQ Level	ECTS
	Field Course at Silwood	CORE	30	45	0	75	0	0	100	7	1.8
	Biological Computing in R	CORE	15.5	72	0	87.5	0	0	100	7	2.3
	Statistics in R	CORE	14.15	73.35	0	87.5	0	0	100	7	2.3
	GIS	CORE	14.5	73	0	87.5	0	0	100	7	2.3
	Social Context and Policy	CORE	19	68.5	0	87.5	0	100	0	7	2.3
	Ecology and Global Change	CORE	24.5	63	0	87.5	0	67.5	32.5	7	2.3
	Science Communication	CORE	19	68.5	0	87.5	0	34	66	7	2.3
	Biogeochemistry	CORE	16	71.5	0	87.5	0	87	13	7	2.3
	Hydrometeorology	CORE	22	65.5	0	87.5	0	45.5	54.5	7	2.3
	Biodiversity	CORE	26	61.5	0	87.5	0	69	31	7	2.3
	Research Project	CORE	0	2025	0	2025	0	100	0	7	67.5

## Supporting Information

The Programme Guidebook is available at: <http://www.imperial.ac.uk/life-sciences/postgraduate/masters-courses/mres-in-ecosystem-and-environmental-change/>

The Module Guidebook is available at: <http://www.imperial.ac.uk/life-sciences/postgraduate/masters-courses/mres-in-ecosystem-and-environmental-change/>

The College's entry requirements for postgraduate programmes can be found at: [www.imperial.ac.uk/study/pg/apply/requirements](http://www.imperial.ac.uk/study/pg/apply/requirements)

The College's Quality & Enhancement Framework is available at: [www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance](http://www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance)

The College's Academic and Examination Regulations can be found at: <http://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".  
<http://www.imperial.ac.uk/admin-services/secretariat/college-governance/charters-statutes-ordinances-and-regulations/>

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