IMPERIAL

Programme Specification 2025-26

Programme Information		
Programme Title	Programme Code	HECoS Code
MSc Environmental Technology	J9UF	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
MSc	1 calendar year (12 months)	Full-time	Annually in October	90	180
PG Cert – J9UC	N/A	N/A	N/A	30	60
You must apply to and join the MSc. The PG Certificate is an exit award that may be offered at the discretion of the Board of Examiners and is not available for entry. A PG Diploma is not available as an exit award on this programme.					

Ownership			
Awarding Institution	Imperial College London	Faculty	Faculty of Natural Sciences
Teaching Institution	Imperial College London	Department	Centre for Environmental Policy
Associateship	Diploma of Imperial College (DIC)	Main Location(s) of Study	South Kensington Campus
External Reference			
Relevant QAA Benchmark Statement(s) and/or other external reference points		N/A	
FHEQ 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 Martin Head	
Student cohorts covered by specification		2025-26 entry	

Date of introduction of programme	October 2019
Date of programme specification/revision	July 2024 (minor mods)

Entry Requirements	
Academic Requirement	The minimum requirement is normally a 2:1 UK Bachelor's Degree in any 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	If you hold a lower class degree your application will be treated on a case-by-case basis and in accordance with the university's MSc entrance requirements.
English Language Requirement	Higher requirement Please check for other Accepted English Qualifications
Admissions Test/Interview	All shortlisted applicants will be interviewed either in person or online.
The programme's competency standards documents are available from the department.	

Programme Overview

The MSc in Environmental Technology will allow you to understand how scientific knowledge, defined in the broadest of senses, can be used in an interdisciplinary manner to address contemporary environmental and sustainability problems. You will be able to progressively build on your previous educational and professional knowledge, combining this with analytical problem-solving frameworks that focus on technology, policy and management.

The MSc in Environmental Technology comprises: a compulsory set of foundational sustainability modules in the Autumn term; an elective "**Option**" in the Spring term that is chosen on application; and an independent **research project** throughout the Summer. It is possible for projects to be carried out partly or wholly at an external organisation.

- You will study all of the foundational modules during the Autumn term. Three modules provide a fundamental grounding in the natural and human worlds, and the interactions between them. Professional and transferrable skills, as part of the "Becoming an Independent Learner" (BIL) module, allow you to develop the confidence and resilience for life-long, independent learning. The BIL module extends through the Spring term and into the Summer term.

- During the Spring term you will join a smaller cohort of students and study one of the specialist "**Options**", which you choose when applying for the Programme. This allows you to build on knowledge acquired from the Autumn term modules and apply it with a career-oriented focus.

- You undertake an extended independent **research project** during the Summer term. This will allow you to study and gain greater depth in an area of personal interest.

The programme is delivered by academic and teaching staff from the Centre for Environmental Policy, draws on relevant experts from around Imperial College London, and brings in external practitioners with deep professional knowledge of their fields.

Graduates from the MSc Environmental Technology gain employment in a wide range of organisations, including businesses, consultancies, think-tanks, government and NGOs. We have an in-house careers advisor and work closely with the university's Careers Service and alumni mentors to help students chart their future careers. Our alumni network comprises over 5,000 former students working across a range of sectors and organisations around the world; alumni often deliver seminars, provide research projects, and offer advice or mentorship to current students.

Some students also choose to go onto further study, either in the CEP or at other institutions.

Programme Learning Outcomes

On completion of the MSc Environmental Technology programme you will be able to:

1. demonstrate a broad understanding of sustainability from a range of perspectives relevant to environmental technology
2. critically engage with a broad range of appropriate literature
3. critically engage with a range of quantitative and qualitative research methods
4. critically select from and use a range of problem-solving strategies and tools to tackle complex and unfamiliar ill-structured problems in a self-directed manner
5. gather, analyse, synthesise and critically evaluate appropriate information relevant to environmental technology and sustainability
6. critically assess evidence of impact from current sustainability policy and practice, and anticipate future risks in the context of evolving sustainability challenges
7. draw out original insights and develop creative solutions to sustainability problems
8. take responsibility for decision making, taking into account the trade-offs and ethical considerations inherent in decision-making
9. communicate effectively to a range of audiences using a variety of media
10. manage your own development in a range of appropriate transferable and professional skills
11. take responsibility for your own learning and develop confidence in your own abilities to tackle complex sustainability challenges.

On completion of the PG Certificate[1], you will be able to:

1. discuss and analyse the interdisciplinary nature of common sustainability problems (1; 2)
2. critically evaluate the legitimacy of different knowledge claims relevant to environmental technology (1;2)
3. critically evaluate the impact of common human-environment interactions on sustainability policy and practice (5; 6)
4. solve common sustainability problems in a skilled and confident way, independently and as part of a team (7; 10)
5. Identify and consider trade-offs in problem-solving and decision-making (5, 8).

The Imperial Graduate Attributes are a set of core competencies which we expect students to achieve through completion of any Imperial degree programme. The Graduate Attributes are available at: https://www.imperial.ac.uk/about/education/our-graduates/

Programme Learning & Teaching Approach

Learning and Teaching Delivery Methods

The MSc in Environmental Technology comprises: Compulsory modules in the Autumn term; a specialist "Option" that is chosen on application in the Spring term; and an extended research project throughout the Summer.

Over the course of the year you will experience a range of learning and teaching methods. Some of these will be common, for example the lectures, seminars and group work experienced by all students in the Autumn term modules; and some may be specific to the specialist Option you enrol onto. Specific details can be found in the module specification forms below.

Overall Workload

Your overall workload consists of face-to-face sessions and independent learning. While your actual contact hours will vary according to the Option 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 for this 90 ECTS MSc programme is 2250 hours per year, subject to reasonable adjustments.

[1] The PG Certificate is an intermediate award that may be offered at the discretion of the Board of Examiners and is not available for entry. All students must apply to and join the MSc. A PG Diploma is not available as an exit award on this programme.

You will likely spend 50% of your time in class doing a variety of activities during the first two terms, depending on which Option you choose to study. The remainder of the time will be spent doing group work or individual study. The majority of the third term is spent on an individual research project.

Programme Assessment Strategy

Programme Assessment Methods

You will be assessed individually and in groups. The type of assessments used in the Autumn term modules are taken by all students, and vary in the Spring term depending on the specialist Option you enrol onto. Specific details can be found in the sections below.

Term Overview
The following sections give an overview of the learning and teaching that take place each term.

Autumn Term

Module Overview

The Autumn term modules present a progressively more complex and in-depth understanding of the natural and human worlds and their interactions. It is highly interdisciplinary, providing an essential breadth of understanding across environmental technology and policy issues, as well as being a precursor to the specialist elective Options in the spring term. You will study three main modules, plus a module on transferable and professional skills called "Becoming an Independent Learner" (BIL), which is extended into the Spring term.

The **Natural World** is a **compulsory** module focused on science and technology. It will normally include subjects taken from ecosystems and ecological theory, climate change, air pollution, biogeochemical cycles, biodiversity and natural resources.
The **Human World** is a **compulsory** module that introduces aspects of economics and markets, consumption, and circular economy, environmental policy and governance, environmental law, demography, poverty, health and wellbeing.
The **Human/Nature Interface** is a **core** interdisciplinary module that uses problem-based case studies that will allow you to understand the interactions between the natural and human worlds. This may include urbanisation and sustainable cities; climate change impacts; forest management; fisheries management; agriculture; Sustainable Development Goals; policy instruments for sustainability.

The "Becoming an Independent Learner" module provides core elements to support you in your transition to professionals and life-long independent learners. It runs across all three terms, covers essential professional and transferable skills and normally includes information searching, career planning, presentation skills, and relaxation and resilience skills.

All modules are delivered by academic and teaching staff from the Centre for Environmental Policy. A full description of the modules is contained in the module specification forms.

Autumn Term Learning Outcomes

On completion of the Autumn term modules you will be able to:

1. appreciate the interdisciplinary nature of sustainability (1)
2. examine critically the breadth of subjects covered (1; 2)
3. integrate and apply knowledge across disciplines with confidence (1; 2; 11)
4. apply the fundamental principles underpinning the human and natural world and their interactions to solve sustainability problems. (1)
5. engage in group learning and communication (9)
6. solve problems in a skilled and confident way, independently and as part of a team (7; 10)

Autumn Term Learning & Teaching Approach

Learning and Teaching Delivery Methods

In the Core Course you will experience a range of learning and teaching methods, including independent study, interactive lectures, small group seminars (small group and independent learning), policy seminars with external speakers, practical computer lab-based problem solving, and online quizzes and assessments.

Much of the Core Course takes place with the whole cohort of c.150[2] students, but you will get to meet different groups of your cohort during the first weeks, e.g. in tutorial groups, small group seminar groups, Option groups and team building exercises, as well as informal networking after policy seminars.

The diversity of the backgrounds of students in each cohort means there is huge diversity in skills and experience to be learned from each other – we hope you will take advantage of that while you are on the programme.

Overall Workload

The expected total study time is 750 hours for Core Course, of which approximately 40% is contact time, including lectures, seminars and practical sessions, and 60% is spent on your own independent and group study. As these are indicative study times, you may need to make reasonable adjustments to these suggested times to account for your individual learning style.

Autumn Term Assessment Strategy

Autumn Term Assessment Methods

The Autumn term modules are intended to develop your interdisciplinary skills. Summative assessments are focused around these aspects. Formative online tests used to provide you with personal feedback on how well you understand the concepts you are being exposed to.

A range of assessment methods are used:

Natural World module: a group modelling + policy recommendations exercise.

Human World module: Two assessments: 1. a group poster and digital presentation with policy and regulatory recommendations; 2. Small Group Seminar and individual 2000-word essay.

Human/Natural Interface module: A week-long timed integrating 2000-word essay.

Peer-assessment is normally used to identify individual contributions and to weight group marks.

Spring Term
You choose a specialist Spring Term "Option" when you apply for the MSc.

Option Overview: Business and the Environment

If you take the Business and the Environment Option (B&E) you will develop a critical understanding of how businesses currently tackle the challenges of sustainability, including the opportunities and risks that businesses face in the light of growing environmental constraints and social inequality.

You will use this knowledge to deal with the complex choices businesses face and develop models of best practice in contemporary thinking and practice for sustainable business. You will build on your knowledge of future sustainability challenges to develop business models that contribute to meeting these challenges.

Lecturers and seminars are delivered by professionals working in the field of sustainable business across a range of sectors. Lectures, case studies, and group work are delivered and facilitated by members of staff

Graduates from the B&E Option go on to work in a wide variety of sectors and in different organizations, including as in-house CSR and sustainability practitioners, consultants, NGOs and government. A few set up their own business or go into further study.

Option Learning Outcomes: Business and the Environment

[2] Approximated annual intake

On completion of the *Business and the Environment* Option you will be able to:

1. gather, analyse, synthesise and critically evaluate knowledge of sustainability and business against contemporary and future environmental and societal challenges (1; 2; 5)
2. identify opportunities for sustainable business development and creation, and choose valid tools and methods to understand and explore them (4)
3. create valid, reliable and defensible solutions to contemporary and future business challenges (6; 7)
4. communicate effectively to a range of audiences using a variety of media (9; 10)
5. work effectively as individuals and as a team, taking responsibility for your own and group learning and performance. (8; 11)

Option Learning & Teaching Approach: Business and the Environment

Option Learning and Teaching Delivery Methods: Business and the Environment
In the *Business and the Environment* Option you will spend 50% of your time in class and 50% on group or individual work. Class-based sessions will normally include seminars, case studies, tutorial groups and team work exercises. You are expected to work effectively in groups and develop your own individual interests through extra reading.

Option Overall Workload: Business and the Environment

You will spend approximately 50% of your time in the classroom, either in seminars, doing group exercises or presentations. The remainder of your time is spent on group work or individual study.
As these are indicative study times, you may need to make reasonable adjustments to these suggested times to account for your individual learning style.

Option Assessment Strategy: Business and the Environment

Option Assessment Methods: Business and the Environment

Two group reports: one including a group presentation; one delivered digitally.
An individual portfolio.
An individual reflective essay.
Peer-assessment is normally used to identify individual contributions and to weight group marks.

Option Overview: Energy Policy

The Energy Policy Option (EP) will introduce you to the exciting and rapidly changing world of the energy transition. You will learn how energy generation, demand and decarbonisation pathways interact to shape current and future energy systems globally and in the UK.

The option introduces and builds on key principles of engineering and physics and integrates these with the fundamentals of economic and policy assessment (markets and behaviour) to provide you with the critical evaluation skills, and methods, to understand and analyse real-world energy system and the policy frameworks which govern them.

Alongside peers with backgrounds across the natural sciences, social sciences, engineering, economics, and other disciplines, you will develop a broad range of skills, balancing quantitative methods with a balanced approach to policy analysis and strategy.

Guided by departmental experts and industry leaders, you will engage with lectures, field trips and coursework, that provide the opportunity to develop the skills for complex problem-solving and interdisciplinary thinking that are highly valued in industry, government and third sector roles.

Option Learning Outcomes: Energy Policy

On completion of the *Energy Policy* Option, you will be able to:

1) Assess key technical, economic, environmental, and social characteristics that enable and constrain energy system transformations.

2) Critically discuss the regulatory frameworks which surround energy markets and develop policy analyses and recommendations.

3) Construct simple energy and cost models and evaluate the possibilities and limitations of the modelling process.

4) Justify the choice of alternative quantitative and qualitative research methods to reach robust conclusions taking into account methodological limitations.

5) Produce clear, critical and authoritative reports, on both technical and policy aspects of energy systems and technology deployment.

6) Confidently present results orally, at a level appropriate to your audience.

7) Manage, participate and take the lead in multi-disciplinary teams, to successfully deliver project outputs.

Option Learning & Teaching Approach: Energy Policy

Option Learning and Teaching Delivery Methods: Energy Policy
The Energy Policy Option includes lectures and discussions led by academic, industry, government and consultancy leaders, group projects, quantitative and modelling skills, and fieldtrip visits to energy facilities
Option Overall Workload: Energy Policy

You will spend approximately 50% of your time in the classroom, either in seminars, doing group exercises or presentations. The remainder of your time is spent on group work or individual study.

Option Assessment Strategy: Energy Policy

Option Assessment Methods: Energy Policy

Assessment is via coursework, individual and group presentations, and an open book exam. Peer assessment will normally be used to weight group work.

Option Overview: Environmental Assessment and Management

By taking the *Environmental Assessment and Management* Option (EAM) you will gain a thorough understanding of the circular economy and the pathways that pollutants follow in the environment from source to receptor. You will be introduced to some of the most important tools and techniques in Environmental Assessment, Decision-Making and Management. Through group work and site visits, you will tackle technical and practical issues involved in pollution, waste and resource management, assess their impact on sustainable development and potential opportunities for business.

The Circular Economy Project (case study) provides the opportunity for you to work on a typical resource management consultancy problem. an opportunity for you to develop knowledge and skills needed to tackle a contemporary circular economy problem. You will be exposed to the some of the current challenges faced by the resource recovery and recycling sector. You will respond to these challenges by developing an innovative solution to the capture and diversion of a specific waste stream, developing a circular alternative. You will develop and put into practice the skills that innovators in the sector need, through a process in which analysis, synthesis, and teamwork harnessed to produce a concise business report and oral presentation.

The Hounslow Heath Project is a further case-study project demanding a different range of practical, analytical and team management skills to help provide solutions to a problem based on contaminated-land use. You will develop skills in analysis, synthesis, risk-based decision making and presentation of a comprehensive and balanced report.

The project is undertaken on behalf of a genuine client (Hounslow Borough Council). Team presentations to the client, individual interviews and a group report form the assessment.

The Tools for Decision Making case study will invite you to explore an environmental management problem in detail through lectures and seminars. You will prepare a case study report investigating decision-making tools which can be applied to the problem and its solution. You will focus on a selection of methodologies in detail, which could include Life Cycle Assessment, Multi Criteria Analysis, Cost Effectiveness Analysis, stakeholder mapping and others.

The overriding objective of the *Environmental Assessment and Management* Option is to train you to be effective team players in the often inter- and multidisciplinary environment of consultancies and related work places.

Option Learning Outcomes: Environmental Assessment and Management

On completion of the *Environmental Assessment and Management* Option, you will be able to:

1) distinguish the fundamental pathways and processes controlling the behaviour and fate of contaminants in environmental systems (1, 2);
2) design suitable field sampling strategies for the assessment of contaminant distributions in the near-surface atmosphere, surface and groundwater and soils (3, 4);
3) suggest appropriate sampling and analytical methods for inorganic and organic contaminants in different environmental media, select appropriate management techniques and policy tools to support decision-making, and liaise effectively with analysts and laboratories specialising in the analysis of individual contaminating substances (3, 4, 9);
4) evaluate resource supply and waste management issues within the context of the complex interrelationships between environment, economics, policy and uncertainty (5,6);
5) formulate strategies to combat the operational challenges faced by the waste management sector, considering all key and developing waste treatment technologies, and the changing policy landscape (1, 2, 5);
6) able to undertake independent critical research in applying management and decision-making tools for contemporary environmental and sustainability issues (1,2);
7) organise data sets obtained from field sampling and laboratory analytical studies and configure these in a suitable format for higher level data analysis using a computer tool such as Geographical Information Systems (3);
8) enhance your own continuous development in a range of appropriate transferrable and professional skills (10, 11);

Option Learning & Teaching Approach: Environmental Assessment and Management

Option Learning and Teaching Delivery Methods: Environmental Assessment and Management

The learning and teaching approach of the *Environmental Assessment and Management* Option combines lecture and classroom sessions with group discussion, coursework project and field visits.
Many of the lecture and classroom sessions are led by external practitioners.

Group discussions will enhance your analytical skills and the group project will allow you to critically synthesise the content of the modules.

Site visits give you the applications to real context situations where you will apply the practical aspects and physical and commercial constraints.

Option Overall Workload: Environmental Assessment and Management

In the *Environmental Assessment and Management* Option, you will spend approximately 50% of your time in the classroom, either in seminars, doing group exercises or presentations. The remainder of your time is spent on group work or individual study.

As these are indicative study times, you may need to make reasonable adjustments to these suggested times to account for your individual learning style.

Option Assessment Strategy: Environmental Assessment and Management

Option Assessment Methods: Environmental Assessment and Management

In the *Environmental Assessment and Management* Option, you will be assessed by:

- A 2000-word individual study paper based on your Tools seminar.
- Assessment by coursework based on the Circular Economy case study project: group report and group presentation.
- A group technical report to a real client based on the Hounslow Heath Project and an individual interview.

Peer assessment will normally be used to weight group work

Option Overview: Environmental Economics and Policy

A critical knowledge of environmental economics is a requirement for anyone dealing with environmental policy issues. Economic analysis has a key role to play, both in understanding why environmental problems arise, and in providing the basis for developing sustainable solutions. What are the underlying causes of tropical deforestation? How rapidly should we take action to deal with global warming? What is the most efficient way to tackle air pollution? These are some of the questions which environmental economists attempt to address, pointing to the need to link individual choices and patterns of behaviour to the underlying structure of the economy and its institutions. Economists argue that solutions require systematic changes to the economic incentives which drive human behaviour.

The demand for individuals with a good grounding in environmental economics, but also with a complementary understanding of other, non-market modes of environmental governance, continues to grow. Our graduates have gone on to exciting careers in government, industry, NGOs, consultancy and research applying economic ideas, concepts and methodologies to environmental problem-solving and policymaking. This Option aims to provide you with a broad but integrated survey of environmental economics and governance as fields of study and assist you in developing an ability to think about and analyse environmental problems in economically-literate and institutionally-informed terms.

Option Learning Outcomes: Environmental Economics and Policy

On completion of the *Environmental Economics and Policy* Option (EEP), you will be able to:

1. demonstrate a critical understanding of environmental sustainability from an economics and policy point of view (1)
2. read and critically engage with a broad range of appropriate literature on environmental economics and policy (2)
3. confidentially and critically select from and use a range of problem-solving strategies and tools commonly applied in environmental economics, policy and sustainability research to tackle complex and unfamiliar ill-structured problems in a self-directed manner (4)
4. critically assess evidence of impact from current environmental policy and practice, and anticipate future risks in the context of evolving sustainability challenges (6, 11)
5. justify the use of modelling choices taking into account the trade-offs and ethical considerations inherent to decision-making (8)

Option Learning & Teaching Approach: Environmental Economics and Policy

Option Learning and Teaching Delivery Methods: Environmental Economics and Policy

By taking the *Environmental Economics and Policy* Option, you will spend 50% of your time in class and 50% working on a group project. Class contact hours will include lectures, seminars and a research visit. Group projects are student driven and develop under the supervision of the Option convenors.

Option Overall Workload: Environmental Economics and Policy

In the *Environmental Economics and Policy* Option, you will spend approximately 50% of your time in the classroom, either in seminars, doing group exercises or presentations. The remainder of your time is spent on group work or individual study.

As these are indicative study times, you may need to make reasonable adjustments to these suggested times to account for your individual learning style.

Option Assessment Strategy: Environmental Economics and Policy

Option Assessment Methods: Environmental Economics and Policy

The assessments for the *Environmental Economics and Policy* Option will comprise:
A timed 2000-word individual essay:
A video presentation or 2000-word essay
A 7000-word group essay.

Peer assessment will normally be used to weight group work

Option Overview: Environmental Resource Management

On the *Environmental Resource Management* Option you will spend the Spring term critically engaging with a range of tools, policies, and practices used for the sustainable management of environmental resources. Building on an understanding of ecosystems and ecosystem services from the Autumn term modules, you will compare the management of different environmental resources, such as fisheries and marine ecosystems, agriculture and farming, forests and woodland, game and wildlife, biomass, soil and water. This will equip you with the interdisciplinary knowledge and skills to make informed decisions relating to real-world problems concerning environmental and natural resource management, embarking on a career in sustainable natural resource management, in roles such as local and national government advisors, NGOs officers and advocates, environmental consultants and policy and practice researchers.

Research-led case studies will be presented by academics as well as external experts and practitioners in evidence-based environmental resource management and decision making. You will work in groups to construct a scenario appraisal model and use this to make recommendations to address your chosen resource challenge. Field visits will enable you to gain first-hand experience of environmental management, engage with professionals and critically assess the practicalities of managing resources.

Students graduating from this Option will be well placed to make informed decisions relating to real-world problems concerning environmental and natural resource management and will be able to evaluate practical management Options. ERM graduates pursue a range of careers, including local and national government departments, NGOs, environmental consultancies and research institutions.

Option Learning Outcomes: Environmental Resource Management

On completion of the Environmental Resource Management Option (ERM), you will be able to:

1) critically analyse environmental resource management challenges and approaches across a range of resources and global contexts (1)
2) compare the effectiveness of a range of analytical, research, and decision-making methods, as well as practical examples relevant to environmental resource management (4, 6)
3) generate outputs from models and analytical methods to inform appropriate solutions to environmental resource management challenges (3, 4, 8)
4) conduct independent and peer research, synthesise learning, trace connections and interactions between resources and approaches, map their knowledge to build a systemic view of environmental resource management (5, 11)
5) critically gather, analyse, and synthesise and evaluate information, presenting results in an appropriate and objective way (2, 5, 6)
6) write concise, clear, critical, and authoritative reports on environmental resource management issues, accessible for a range of audiences (9, 11)
7) reflect upon their experience, observation and learning, as well as the contribution of their peer and group (10, 11)

Option Learning & Teaching Approach: Environmental Resource Management

Option Learning and Teaching Delivery Methods: Environmental Resource Management

By taking the *Environmental Resource Management* Option you will spend 50% of your time on group or individual work, and 50% in class or on field trips. Class sessions will be delivered through 1) interactive and flipped-classroom sessions/lectures from experts and practitioners in ERM; 2) small group seminars and discussion groups; 3) labs and computer-based sessions; 4) Day field-trips. You will undertake a group modelling project, arranging your own working sessions. Additionally, you will be expected to complete preparatory activities for some sessions and follow up others with your own wider reading.

As these are indicative study times, you may need to make reasonable adjustments to these suggested times to account for your individual learning style.

Option Assessment Strategy: Environmental Resource Management

Option Assessment Methods: Environmental Resource Management

The assessments in the *Environmental Resource Management* Option will comprise:

A group modelling project assessed through a presentation and a written report

Two pieces of written coursework – an essay and a policy brief

Assessed contribution/participation to two group discussion sessions

A multiple-choice data interpretation exercise

Peer assessment will normally be used to weight group marks.

Option Overview: Global Environmental Change and Policy (GECP)

The overall aim of the *Global Environmental Change and Policy* Option (GECP) is to provide you with the opportunity to become future, effective participants in addressing the grand challenges of global environmental change. You will do so by reference to current, leading environmental problem solvers. You will learn to apply the tools, methods, knowledge and critical analytical skills that are required to address these grand challenges with climate change as a focal point. This will include progressive regulatory and policy responses to global environmental change problem solving activities. The structure of the Option will support you to independently apply the necessary tools and methods to address GECP questions within an effective critical analytical framework. This is done through technical and corresponding contemporary regulatory and policy dialogues arranged into three main modules organised as follows:

1. **Baselining the Global Environmental Condition:** What are the nature and causes of global environmental change (GEC)?
2. **Methods for Tackling Global Environmental Change:** What are the disciplinary and interdisciplinary scientific bases and policy and legal frameworks to address GEC?
3. **Implementing Interdisciplinary Grand Challenge Solutions to Global Environmental Change**: What can and should be done about mitigating and adapting to GEC?

Option Learning Outcomes: Global Environmental Change and Policy

On completion of the *Global Environmental Change and Policy* Option, you will be able to:

1. demonstrate a broad, critical interdisciplinary understanding of climate change and other key issues in global environmental change from multi stakeholder perspectives (1)
2. read and critically engage with a broad range of appropriate literature (2)
3. critically select from and use a range of quantitative and qualitative research methods, tools, and strategies to tackle complex and unfamiliar global environmental change (e.g., climate change) problems in a self-directed manner (3; 4)
4. identify, critically analyse and synthesise information pertaining to the key drivers of climate change and other global environmental change issues in order to anticipate future global environmental challenges and the level of risk that they may carry (5; 6)
5. formulate original insights and produce creative solutions taking account of existing global environmental change standards (7)
6. critically assess the trade-offs and ethical considerations inherent in decision-making for stakeholders individually and collectively (8)
7. critically evaluate modelling results and research findings in a stakeholder and multi-stakeholder negotiation pertaining to selected global environmental problem solving issues (4; 9)
8. maintain and enhance continuous improvement of understanding of the field by reference to professional management tools (10; 11)

Option Learning & Teaching Approach: Global Environmental Change and Policy

Option Learning and Teaching Delivery Methods: Global Environmental Change and Policy

You will be expected to actively participate in class, group and coursework in order to develop understanding, skills and capabilities in global environmental change taking particular account of climate change.

50% of the class time will be devoted to lecture and seminar presentation formats and the other 50% will be concerned with individual, small group and plenary critical analysis, peer-to-peer learning and simulated discipline and stakeholder role play sessions, in which a range of problem-solving methodologies are introduced and applied. Staff-student, peer-to-peer and small team problem solving interactions will be predominant features of class life with assessment processes drawn from these experiences.

Option Overall Workload: Global Environmental Change and Policy

As these are indicative study times, you may need to make reasonable adjustments to these suggested times to account for your individual learning style.

Option Assessment Strategy: Global Environmental Change and Policy

Option Assessment Methods: Global Environmental Change and Policy

The assessments in the *Global Environmental Change and Policy* Option will comprise:

- Panel Project

- Negotiation exercise (video) & class participation

- Individual problem solving assessment. The assessment involves writing two short reports requiring the critical assessment of interdisciplinary scientific and policy material related to a specific situational context.

Peer assessment will normally be used to weight approximately 5% of the group work

Option Overview: Integrated Water Management

The aim of the *Integrated Water Management* Option (IWM) is to cater for a variety of different learner requirements and aspirations to ensure that they develop the knowledge and skills necessary to make a significant contribution to water management. You will gain a thorough understanding of water systems and of the complex interrelationships between the environment, economics, policy and uncertainty in water management. You will appreciate the operational issues of a major water company and the complex environment in which it operates. You will be introduced to some of the most important tools and techniques in Integrated Water Decision-Making and Management. Through group work and site visits, you will gain insight into the latest challenges in integrated water management, policy and practice, and engage with individuals and organisations to familiarise themselves with the most recent developments in IWM.
The Anglian Water Project (case study) provides the opportunity for you to develop the knowledge and skills required to meet Water Industry needs. You will develop knowledge of water operations in terms of collection, treatment and distribution of water and understanding of wastewater in terms of collection, treatment and disposal, while gaining understanding of the organisation and management of the Water Industry in the UK. Through this project, you will be part of the process in which analysis, synthesis, and teamwork are required to produce a concise quality report and oral presentation to a genuine client. You will develop key skills in site investigation, policy analysis, and the legislative environment.

The Hounslow Heath Project is a further case-study project demanding a different range of practical, analytical and team management skills to help provide solutions to a problem based on contaminated-land use. You will develop skills in analysis, synthesis, risk-based decision making and presentation of a comprehensive and balanced report. The project is undertaken on behalf of a genuine client (Hounslow Borough Council) and team presentations are made to the client on completion of the project.

The *Tools for Decision Making* case study will invite you to explore an environmental management problem in detail through lectures and seminars. You will prepare a case study report investigating decision-making tools which can be applied to the problem and its solution. You will focus on a selection of methodologies in detail, which could include Life Cycle Assessment, Multi Criteria Analysis, Cost Effectiveness Analysis, stakeholder mapping and others.

Throughout this Option, the teaching and learning stresses the need to act within and with the guidance of relevant national and international legislative frameworks. It is also important to develop an appreciation of the way in which requirements and preferred management options may be driven by policy developments. The ultimate aim of this Option is to prepare you for employment in environmental consultancies and other occupational areas (such as local authorities, government departments and NGOs) in which broad, knowledgeable management skills are needed.

Option Learning Outcomes: Integrated Water Management

On completion of the *Integrated Water Management* Option, you will be able to:

1) distinguish the fundamental pathways and processes controlling environmental systems, and develop insights into the pressures on water systems and impacts to water security (1, 2, 7)
2) gather, synthesise and critically evaluate knowledge of sustainable integrated water management techniques in the face of current and potential future environmental challenges at both the global and local level (2, 4, 5)
3) identify the benefits and drawbacks provided by such techniques, investigating and understanding their impacts on different stakeholders, including the pressures that may be driving other cooperating partners (6)

4) use decision-making tools to create valid, reliable and defensible solutions to water management challenges, taking into account current and probable future risks, pressures and social justice (4,6)
5) work professionally within an organisation, cooperating with others and communicating ideas in oral and written form to people from a wide range of differing backgrounds (9)
6) work effectively as individuals and as a team, taking responsibility for own development as well as group learning and performance at both levels (11).

Option Learning & Teaching Approach: Integrated Water Management

Option Learning and Teaching Delivery Methods: Integrated Water Management

The learning and teaching approach of the *Integrated Water Management* Option combines lecture and classroom sessions with group discussion, coursework project and field visits.

Group discussions will enhance students' analytical skills and the group projects allow students to critically synthesise the content of the modules to create a best practice water management strategy.

Site visits give students the applications to real context situations where they can apply the practical aspects and physical and commercial constraints.

Option Overall Workload: Integrated Water Management

In the *Integrated Water Management* Option, you will spend approximately 50% of your time in the classroom, either in seminars, doing group exercises or presentations. The remainder of your time is spent on group work or individual study.

As these are indicative study times, you may need to make reasonable adjustments to these suggested times to account for your individual learning style.

Option Assessment Strategy: Integrated Water Management

Option Assessment Methods: Integrated Water Management

In the *Integrated Water Management* Option, you will be assessed as follows:

- A 2000-word individual study paper based on your Tools seminar.
- A group consultancy report based on a case study project which simulates a typical problem given to consultants in water management.
- A group presentation of the consultancy report to a potential client.
- A group technical report to a real client based on the Hounslow Heath Project and an individual interview..

Peer assessment will normally be used to weight group work

Option Overview: Urban Sustainable Environments

The *Urban Sustainable Environments* Option (USE) will introduce you to the relationship between urban environments, their functionality and several key aspects of human health. Recognizing the challenges of urban growth worldwide, you will participate in trans-disciplinary dialogues about the opportunities and solutions to foster sustainable and healthy urban environments in a field that is intrinsically multidisciplinary.

In this Option you will address the 'workings' of cities to identify important and often challenging urban sectors such as energy, water, waste, transport and land use planning, and assess the interplay between the built, natural and social environments. Sectors will be analysed and studied through proposed solutions, stressing the need for systems thinking and integrated assessments. Example solutions will include technological approaches such as for smart mobility, land use planning practices such as green space provision, transport policies such as active travel infrastructure, and societal engagement to ensure citizen buy-in.

To address the question of how future cities can be resilient, sustainable, and liveable, students study the interactions among individuals, government entities, and the environment within each sector. This transversal analysis scrutinizes the roles played by each actor (individuals, government, and the environment) in solving urban

challenges. The option places a strong emphasis on understanding social justice issues within cities. This empowers students to engage in critical discussions and analysis of the issue, equipping them to consider and incorporate social justice principles when formulating sustainable urban policies and solutions.

Lectures and seminars are delivered by professionals and academics working across a range of urban-relevant sectors. Case studies and group work are delivered and facilitated by members of staff. Additionally, a set of field trips provides firsthand experiences that illustrate the challenges and real-world implications of sustainable urban policies.

Option Learning Outcomes: Urban Sustainable Environments

Option Learning and Teaching Delivery Methods: Urban Sustainable Environments

On completion of the *Urban Sustainable Environments* Option, you will be able to:

1. critically discuss the key elements of city infrastructure and the challenges and opportunities that these present (1; 2)
2. map the interactions between the key bodies and groups that have influence over urban planning and systems and discuss the influential drivers of sustainable decision-making in an urban context (1)
3. undertake stakeholder mapping exercises and assess the routes to effective stakeholder engagement for sustainable decision-making (1)
4. evaluate and select potential solutions to urban-specific governance and policy challenges (4)
5. collaborate with peers to distribute and execute tasks; efficiently gather, analyse, synthesise and critically evaluate information in an appropriate and objective way (5; 10)
6. communicate with specialists and experts across a range of disciplines relevant to the urban infrastructure and produce management reports to advise relevant 'clients' (9)
7. evaluate the impact of urban planning and infrastructure on the health of urban populations (6)

Option Learning & Teaching Approach: Urban Sustainable Environments

The *Urban Sustainable Environments* Option comprises three modules that offer different approaches to learning and teaching to provide a varied learning experience. Content-driven lecture sessions to ensure key material is delivered in this 'in clear sight' format; field visits with external expert practitioners; discussion sessions of set reading materials and of field visits; briefing sessions; group and individual tasks; elements of self and peer evaluation. Together, approaching the teaching and learning experience in a diverse way that will introduce you to a range of experiences that you are likely to encounter in the world of work.

Option Overall Workload: Urban Sustainable Environments

In the *Urban Sustainable Environments* Option, you will spend approximately 50% of your time in the classroom, either in seminars, doing group exercises or presentations. The remainder of your time is spent on group work or individual study.

As these are indicative study times, you may need to make reasonable adjustments to these suggested times to account for your individual learning style.

Option Assessment Strategy: Urban Sustainable Environments

Option Assessment Methods: Urban Sustainable Environments

Assessment takes place at the module level but is designed within the overall framework of the Option's three modules to provide a coherent whole that assesses the range of skills considered within our learning outcomes.

The assessments for the *Urban Sustainable Environments* Option will comprise:

- A Case Study assessed via group and individual components
- Presentations to a client
- A field visit portfolio
- An Advisory Briefing Note
- An individual timed essay

Peer assessment will normally be used to weight group work

Summer Term: Independent Research Project

Independent Research Project Overview

You will undertake a four-month independent research project from Easter until September, supervised by a member of staff. You will have the opportunity to gain a deeper academic understanding of an area of personal interest in sustainability and environmental technology.

Projects are normally developed based on your chosen Option studies but may be developed independent of that. You may have the opportunity to work with academic research groups, on projects proposed or supported by external partners, or develop your own project.

It is expected that you will be able to draw novel insights from your area of study.

Independent Research Project Learning Outcomes:

On completion of this module, you will be able to:

- apply appropriate methodology to conduct a small-scale research project (4, 5)
- critically engage with a range of quantitative and qualitative research methods (3)
- draw out original insights from your research (7)
- understand the wider implications of your research (6)
- present your findings in written format (9)
- plan and take responsibility for your own learning (8, 11)

Independent Research Project Learning & Teaching Approach

Independent Research Project Learning and Teaching Delivery Methods
You are expected to work with an academic supervisor during the Independent Research Project term. Learning and teaching will be delivered by the supervisor where appropriate, but it is expected that you will take initiative in most cases and find out relevant information with minimal guidance.

Independent Research Project Overall Workload

You will be expected to work independently under the supervision of an academic member of staff for the duration of the Independent Research Project. This is a 40 ECTS module and the expected total study time is 1000 hours.

As these are indicative study times, you may need to make reasonable adjustments to these suggested times to account for your individual learning style.

Independent Research Project Assessment Strategy

Independent Research Project Assessment Methods

A 10,000-word research dissertation accounts for 100% of the mark. You are expected to attend regular formative meetings with your project supervisor(s) and to prepare appropriately for those meetings.

Academic Feedback Policy

Written or verbal feedback will normally be provided within two weeks of the submission date for any assessed work, unless this falls over holiday periods, in which case coursework is returned at the start of the next term.

Imperial'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
Imperial's Policy on Re-sits is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/
Mitigating Circumstances Policy
Imperial'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
There are no additional costs associated with this Programme	N/A	N/A

Programme Structure[3]

Year 1 - FHEQ Level 7
You will study all modules from Groups A (Autumn Term) and B (Research Project)

You will elect to take a specialist Option on enrolment and study all compulsory modules in that Option Group:

Business and the Environment: Group C
Energy Policy: Group D
Environmental Assessment and Management: Group E
Environmental Economics and Policy: Group F
Environmental Resource Management: Group G
Global Environmental Change and Policy: Group H
Integrated Water Management: Group I
Urban Sustainable Environments: Group J

Code	Module Title	Core/ Compulsory/ Elective	Group	Term	Credits
Autumn Term		Compulsory	A	Autumn	
ENVI70001	The Human World	Compulsory	A	Autumn	7.5
ENVI70002	The Natural World	Compulsory	A	Autumn	7.5
ENVI70003	The Human/Environment Interface	Core	A	Autumn	7.5
Research Project		Compulsory	B	Autumn-Summer	
ENVI70004	Becoming an Independent Learner	Compulsory	B	Autumn-Summer	5
ENVI70005	Environmental Policy Independent Research Project	Core	B	Summer	40
Option: Business and the Environment		Elective	C	Spring	
ENVI70006	Learning from Sustainable Business	Compulsory	C	Spring	7.5
ENVI70007	Sustainable Business in Practice	Compulsory	C	Spring	7.5
ENVI70008	Innovation and Entrepreneurship for Sustainability	Compulsory	C	Spring	7.5
Option: Energy Policy		Elective	D	Spring	
ENVI70009	Energy Technologies	Compulsory	D	Spring	7.5
ENVI70010	Energy Economics and Policy	Compulsory	D	Spring	7.5
ENVI70011	Integrated Energy Systems	Compulsory	D	Spring	7.5

[3] **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.

Option: Environmental Assessment and Management		Elective	E	Spring	
ENVI70012	Circular Economy	Compulsory	E	Spring	7.5
ENVI70013	Assessment Tools and Decision-Making	Compulsory	E	Spring	7.5
ENVI70014	Integrated Land and Water Quality Management	Compulsory	E	Spring	7.5
Option: Environmental Economics and Policy		Elective	F	Spring	
ENVI70015	Foundations of Environmental Economics and Policy	Compulsory	F	Spring	7.5
ENVI70016	Research Methods in Environmental Economics and Policy	Compulsory	F	Spring	7.5
ENVI70017	Topics in Environmental Economics and Policy	Compulsory	F	Spring	7.5
Option: Environmental Resource Management		Elective	G	Spring	
ENVI70018	Critical and Analytical Approaches to Environmental Resource Management	Compulsory	G	Spring	7.5
ENVI70019	Environmental Resource Management in Practice	Compulsory	G	Spring	7.5
ENVI70020	Challenges And Solutions to Environmental Resource Management	Compulsory	G	Spring	7.5
Option: Global Environmental Change and Policy		Elective	H	Spring	
ENVI70021	Baselining the Global Environmental Condition	Compulsory	H	Spring	7.5
ENVI70022	Methods for Tackling Global Environmental Change	Compulsory	H	Spring	5
ENVI70023	Implementing Interdisciplinary Grand Challenge Solutions to Global Environmental Change	Compulsory	H	Spring	10
Option: Integrated Water Management		Elective	I	Spring	
ENVI70024	Water Systems and Technology	Compulsory	I	Spring	7.5
ENVI70025	Integrated Management Tools	Compulsory	I	Spring	7.5
ENVI70014	Integrated Land and Water Quality Management	Compulsory	I	Spring	7.5
Option: Urban Sustainable Environments		Elective	J	Spring	
ENVI70026	Infrastructure of Urban Environments	Compulsory	J	Spring	7.5
ENVI70027	Governance and Engagement in Urban Environments	Compulsory	J	Spring	7.5
ENVI70028	Integrated Urban Systems	Compulsory	J	Spring	7.5
				Credit Total	90

* 'Group' refers to module grouping (e.g. a group of electives from which modules must be taken).

Progression and Classification

Award and Classification for Postgraduate Students

Award of a Postgraduate Certificate (PG Cert)
To qualify for the award of a postgraduate certificate you must have a minimum of 30 credits at Level 7.

Award of a Masters Degree
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 university 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%.

For a Masters, your classification will be determined through the Programme Overall Weighted Average and the designated dissertation or final major project module 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.
Imperial's entry requirements for postgraduate programmes can be found at: www.imperial.ac.uk/study/apply/postgraduate-taught/entry-requirements/
Imperial's Quality & Enhancement Framework is available at: www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance
Imperial's Academic and Examination Regulations can be found at: www.imperial.ac.uk/about/governance/academic-governance/regulations
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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.