Contents

Welcome to the College......................................................................................................................... 1
Our Principles ........................................................................................................................................ 2
Welcome from the Graduate School....................................................................................................... 3
The Graduate School.............................................................................................................................. 4
Welcome from the Graduate Students’ Union (GSU)........................................................................... 5
Welcome to the Centre for Environmental Policy and MSc Environmental Technology................. 6
  Academic and Administrative staff ...................................................................................................... 7
  English language requirement ........................................................................................................... 8
  Attendance and absence .................................................................................................................... 8
  Key dates 2020–21 ..............................................................................................................................
2. Programme Information........................................................................................................................ 9
  Programme learning outcomes .......................................................................................................... 10
  Core Course (Autumn Term) ............................................................................................................. 10
  Required Reading ............................................................................................................................. 10
  Course Inductions: ............................................................................................................................ 12
  Human World Module ....................................................................................................................... 14
  Human/Natural Interface module ...................................................................................................... 35
  Small Group Seminars ...................................................................................................................... 35
  Policy Seminars ................................................................................................................................. 36
  Interdisciplinary Case Studies .......................................................................................................... 37
    Becoming an Independent Learner Module (BIL)............................................................................ 41
    BIL Module summaries .................................................................................................................. 42
    Structuring Arguments and Critical Thinking ................................................................................ 51
3. Timetable (first week).......................................................................................................................... 54
  Welcome to Imperial app .................................................................................................................. 56
  Imperial Success Guide ..................................................................................................................... 56
4. Assessment........................................................................................................................................... 57
  Plagiarism .......................................................................................................................................... 59
  Collusion ........................................................................................................................................... 60
  Exam offences .................................................................................................................................... 60
  Dishonest practice ............................................................................................................................... 60
5. Board of Examiners ............................................................................................................................. 61
6. Location and Facilities.......................................................................................................................... 63
7. Placements ........................................................................................................................................... 65
8. Working While Studying ...................................................................................................................... 66
9. Health and Safety .................................................................................................................. 67
   Welcome pack .......................................................................................................................... 67
   Good infection control ............................................................................................................. 67
   Hand sanitisers and multi-surface cleaning wipes ................................................................. 67
   Social distancing .................................................................................................................... 67
   Face coverings ....................................................................................................................... 67
10. College Policies and Procedures ......................................................................................... 70
    Regulations for Students ........................................................................................................ 70
    Academic Feedback Policy .................................................................................................. 70
    Provisional Marks Guidance ............................................................................................... 70
    Late Submission Policy ......................................................................................................... 70
    Mitigating Circumstances ...................................................................................................... 71
    Academic Misconduct Policy and Procedures .................................................................... 71
    Unsatisfactory Progress ........................................................................................................ 72
    Academic Appeals Procedure .............................................................................................. 72
    Arithmetic Marks Check ...................................................................................................... 72
    Student Complaints .............................................................................................................. 72
    Student Disciplinary Procedure ......................................................................................... 72
    Intellectual Property Rights Policy .................................................................................... 73
    Use of IT Facilities ............................................................................................................... 73
    General Data Protection Regulation (GDPR) ....................................................................... 73
11. Wellbeing, Support and Advice ......................................................................................... 74
    In your department ............................................................................................................... 74
    Your Union ........................................................................................................................... 74
    Student Hub .......................................................................................................................... 75
    Student Support Zone .......................................................................................................... 75
    Useful support contacts ........................................................................................................ 75
12. Student Records and Data .................................................................................................. 77
13. Work-life Balance .................................................................................................................. 77
    Graduate Students’ Union .................................................................................................... 77
    Move Imperial ....................................................................................................................... 77
14. Student feedback and representation ............................................................................... 79
    Feedback from students ........................................................................................................ 79
    Student representation ......................................................................................................... 79
    Staff-Student Committee ..................................................................................................... 79
15. Student Surveys .................................................................................................................... 80
16. And finally ............................................................................................................................. 81
    Alumni Services ................................................................................................................... 81
Welcome to the College

Congratulations on joining Imperial College London, the only university in the UK to focus exclusively on science, medicine, engineering and business.

From Fleming’s discovery of Penicillin to Gabor’s invention of holography, Imperial has been changing the world for well over 100 years. You’re now part of this prestigious community of discovery and we hope you will take this opportunity to make your own unique contribution.

We understand that this is a challenging time for our student community due to the impact of coronavirus and we are committed to providing you with the very best academic resources to enrich your experience. Information on teaching and learning, services and facilities to support the wider student experience during the Covid-19 pandemic can be found on the College’s webpages, alongside local information provided by your Department. We also provide a dedicated support network and a range of specialist support services to make sure you have access to the appropriate help, whether that’s further training in an academic skill like note taking or simply having someone to talk to.

You’ll have access to an innovative range of professional development courses within our Graduate School throughout your time here, as well as opportunities to meet students from across the College at academic and social events – see page 6 for more information.

We actively encourage you to seek out help when you need it and try to maintain a healthy work-life balance. Our choice of over 360 clubs, societies and projects is one of the largest of any UK university, making it easy to do something different with your downtime. Access to the gym and other sporting facilities will be dependent on government guidance. We are working to ensure that you have access to a variety of resources online to support your health and wellbeing if there are restrictions.

As one of the best universities in the world, we are committed to inspiring the next generation of scientists, engineers, clinicians and business leaders by continuing to share the wonder of what we do through public engagement events. Postgraduate students, alongside our academics and undergraduate students, make a significant contribution to events such as our annual Imperial Festival and our term-time Imperial Fringe events – if you’re interested in getting involved then there will be opportunities for you to do so.
Our Principles
In 2012 the College and Imperial College Union agreed ‘Our Principles’ a series of commitments made between students and the College. The Principles are reviewed annually by the Quality Assurance and Enhancement Committee and changes recommended for Senate approval.

**Imperial will provide through its staff:**
- A world class education embedded in a research environment
- Advice, guidance and support
- The opportunity for students to contribute to the evaluation and development of programmes and services

**Imperial will provide students with:**
- Clear programme information and assessment criteria
- Clear and fair academic regulations, policies and procedures
- Details of full programme costs and financial support
- An appropriate and inclusive framework for study, learning and research

**Imperial students should:**
- Take responsibility for managing their own learning
- Engage with the College to review and enhance provision
- Respect, and contribute to, the Imperial community

**The Imperial College Students' Union will:**
- Support all students through the provision of independent academic and welfare assistance
- Encourage student participation in all aspects of the College
- Provide a range of clubs, societies, student-led projects and social activities throughout the year
- Represent the interests of students at local, national and international level

[www.imperial.ac.uk/students/our-principles](http://www.imperial.ac.uk/students/our-principles)
Welcome to Imperial College London and the Graduate School!

The Graduate School is responsible for the postgraduate experience at the College and we work closely with the Union and the Graduate Students' Union to ensure that when decisions are being made, which affect your time at Imperial, your voice is heard.

Another important aspect of our role is to offer you a free and exciting range of professional development opportunities which you can access wherever you are in the world.

Our team of tutors have a variety of research and other career experiences. We understand the importance of developing professional skills and our programmes will help you to progress in your academic studies and research and will prepare you for your future career. Whether you wish to pursue a career in academia, industry or something else, professional development training will improve your personal impact. You will also get to meet students from other Departments when attending our courses.

The Graduate School runs exciting competitions throughout the year which are an opportunity to broaden your knowledge as well as to meet other students and have fun. Our primary way to communicate to you will be through our monthly newsletter. However, do check our website, blog and social media platforms to keep up to date with all the latest activities available to you.

Finally, Imperial College is an extremely exciting, stimulating and diverse environment in which to work, to study and to research. Do make the most of all that the College and your programme has to offer.
The Graduate School
You automatically become a member of the Graduate School when you register as a postgraduate student at Imperial.

The Graduate School has been set up to support all postgraduate students at the College through:

- Training and development courses
- Networking activities, social and academic events to encourage cross-disciplinary interactions
- Forums to represent the views of postgraduate students throughout the College

‘Masterclass’ professional skills courses
You can see the full range of free professional skills courses for postgraduate students on the Graduate School website:

www.imperial.ac.uk/study/pg/graduate-school/students/masters/

All courses can be booked online.

Contact us

Level 3, Sherfield Building, South Kensington Campus
020 7594 1383
graduate.school@imperial.ac.uk
www.imperial.ac.uk/graduate-school
Welcome from the Graduate Students’ Union (GSU)

I am delighted to welcome you to the Imperial College and the Graduate Students’ Union (GSU). I hope you have a fantastic time here.

The Graduate Students’ Union is a university-wide representative body elected by postgraduate students. Our job is to stand up for your interest as a postgraduate and ensure that you have the most enjoyable and beneficial time possible at Imperial. As the GSU President, I want to emphasise that it is postgraduate students that Imperial is relying on to maintain its position as a Top 10 university in the world, therefore, your voices really do matter!

This year, our GSU Committee will keep improving postgraduate well-being by increasing the quality of supervision and by creating strategies to tackle mental health issues. Meanwhile, we will also try to strengthen the relationship with enterprises, so that we can co-organize more campus activities, negotiate job and internship opportunities for our postgraduate students and raise more money for our social and recreational events.

We also realised your learning, researching and job/internship application in this year might be terribly influenced by the COVID-19 pandemic. This might also be worrying you. To minimise the effects and guarantee that your voices are heard, my team and I will meet you through online or offline channels, collect your opinions and ideas, and advocate them to the university.

This GSU Committee is ready to serve for you. We are happy to answer your questions and fully expect to receive your feedback. I wish you all the best at Imperial. Please stay happy and healthy!

Zixiao Wang
President of Graduate Students’ Union
Imperial College London
Email: gsu.president@imperial.ac.uk
Welcome to the Centre for Environmental Policy and MSc Environmental Technology

Dr Mike Tennant  
Course Director, MSc Environmental Technology

Today we have over 160 people joining us from around the world and a wide range of backgrounds - it’s my great pleasure to welcome you all to the CEP and the MSc in Environmental Technology.

You’re joining a large and diverse family of sustainability professionals. We’re incredibly proud of the 5000+ alumni who have graduated from this course since it started in 1977. We very much hope that you’ll follow in their footsteps, acting to lead the ever-growing number of people and organizations that are making a positive effect on the environmental and society.

Each of you will have different motivations and aspirations and we want you to work together, contributing and taking advantage of the diversity of disciplinary and cultural experience that you all bring. This will allow you to develop your understanding of contemporary sustainability problems, harness your passions and work towards achieving your goals.

You’ll find that there’s a lot to learn and if you commit yourself to the course and enjoy your learning you’ll flourish. The Core Course will provide you with a broad and fundamental set of tools that enable you to work in an interdisciplinary manner, essential to tackle any of the sustainability issues that we see around us today. In the second term you’ll be applying that knowledge to a specific area and starting on the journey to become an expert in your chosen field. The summer term gives you the opportunity to engage in a detailed research project with a member of staff and to pave the way to your new career in sustainability.

The COVID-19 pandemic has presented us with some opportunities as well as some challenges. We’ve been working hard to streamline the delivery of the MSc and have introduced new elements of group learning that we think will be particularly beneficial. To make the most of this we all need to be adaptable, recognising that our learning and teaching environment may change at very short notice. If we all work together, students and staff alike, and be forgiving of some of the bumps that may occur, this year will be as successful as all of our previous years.

The MSc isn’t only about work though - it’s also about creating strong and lasting friendships and professional relationships. We encourage you to see your year here as an opportunity to make friends, and this means that you should spend as much time working and socialising with others as you do with your work. A lot of our organised socialising may be in smaller groups than usual, or online, but we do believe that this is only temporary and that there will be many opportunities to meet others.

The MSc in Environmental Technology is a journey that will point you in the direction of a career that makes a difference in the world. I, and all of my colleagues in the CEP, hope that you enjoy this journey and make the most of your time with us.
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**English language requirement**
If you are not a native English speaker you must meet the College’s English language requirements.

See the Admissions website for details:

[www.imperial.ac.uk/study/pg/apply/requirements/english](http://www.imperial.ac.uk/study/pg/apply/requirements/english)

For information on English language support available through the College Centre for Academic English while you’re here, see [https://www.imperial.ac.uk/academic-english/](https://www.imperial.ac.uk/academic-english/).

**Attendance and absence**
You must inform your Senior Postgraduate Tutor if you are absent from the College for more than three days during term. If the absence is due to illness you must produce a medical certificate after seven days. If you are ill and miss an assessment deadline (this could be an examination, presentation or a coursework submission) you will need to make a claim for mitigating circumstances within 10 working days of the deadline. Please see the section on mitigation below.

The Registry will be informed of all student non-attendances as the College is obliged to report the non-attendance of students on Tier 4/Student Route visas to the Home Office.

Attendance is monitored regularly by CEP to comply with Home Office/HM Border Force visa requirements:

Core Course (Autumn Term): Registration; Access Blackboard in first week; Small Group Seminar (attendances and submissions); Test Attendances; a few other things (registers).

Option (Spring Term): ~10 events during the Option

Thesis (Summer Term): Project Review; Proposal Submission; Meetings with supervisor; Project Interim Viva; Thesis Submission; Executive Summary Submission.

**Key dates 2020–21**

**Term dates**

<table>
<thead>
<tr>
<th>Term</th>
<th>Dates</th>
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</thead>
<tbody>
<tr>
<td>Autumn term</td>
<td>3 October 2020 - 18 December 2020</td>
</tr>
<tr>
<td>Spring term</td>
<td>9 January 2021 - 26 March 2021</td>
</tr>
<tr>
<td>Summer term</td>
<td>24 April 2021 - 25 June 2021</td>
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**Closure dates**

<table>
<thead>
<tr>
<th>Holiday</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Christmas/New year</td>
<td>24 December 2021 - 1 January 2021 (College reopens 4 January 2021)</td>
</tr>
<tr>
<td>Easter Holiday</td>
<td>1 April 2021 - 6 April 2021 (College reopens on 7 April 2021)</td>
</tr>
<tr>
<td>Early May Bank Holiday</td>
<td>3 May 2021</td>
</tr>
<tr>
<td>Spring Bank Holiday</td>
<td>31 May 2021</td>
</tr>
<tr>
<td>Summer Bank Holiday</td>
<td>30 August 2021</td>
</tr>
</tbody>
</table>
Key events

Great Exhibition Road Festival: 3 - 4 July 2021

Illness, Emergencies and Absence

Please notify the CEP Teaching Office if you are unable to attend classes as a result of illness or other severe emergency. This is a College requirement if you are away for over three days. If your absence is due to illness and lasts for more than six days, a medical certificate must be brought to the Postgraduate Office.

In the event of any highly contagious disease DO NOT come to College, but notify the Teaching Office. All lecture and supporting material is made available on Blackboard so you can easily catch up lectures that may have been missed. See the College Alerts website at http://www3.imperial.ac.uk/alerts for more guidance.

If a prolonged illness or personal emergency prevents you from meeting course work submission deadline, you may be able to apply for an extension to submission deadlines. These are dealt with by our Mitigating Circumstances Board. We encourage you to speak with your personal tutor or the department tutors if you have any issues, but this isn’t necessary to file a request. Full details of the process can be found online (login required).

https://www.imperial.ac.uk/environmental-policy/msc/mitigating-circumstances/

More details on these and other regulations can be found in the Freshers’ Handbook.

2. Programme Information

MSc Environmental Technology Course Overview

Core Course

- Natural World (7.5 ECTS)
- Human World (7.5 ECTS)
- Human/Natural Interface (7.5 ECTS)

Options

- module 1
- module 2
- module 3

Research

- research methods
- research

BTL (5 ECTS over 2 terms)
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.

Core Course (Autumn Term)

*Dr Bill Sheate and Dr Caroline Howe (Co-Directors)*

The Core Course comprises of four modules: Human World, Natural World, Human/Natural Interface and Becoming an Independent Learner, which are described below.

Required Reading

(not timetabled)

Classic core texts

Three key books that were critical agenda setters of their day and along with a recent review book set out the historical context to the environmental and sustainability challenges we are faced with now. The Core Course will enable you to update and critique these seminal works and provide you with a thorough understanding of the causes of environmental problems and the scope for potential solutions. You are expected to have read these texts (copies in the library or available online or to purchase) by the end of the Core Course. This will provide you with a solid foundation of understanding of the key issues for the end of term timed integrating essay, which is part of the assessment for the Human/Natural Interface module:
1. Rachel Carson (1962), ‘Silent Spring’, Houghton, Mifflin, USA


Please note that, other than the four texts above, there are NO required books for the Core Course, since so much depends on an individual student's background and interests. Decisions on which books, if any, to purchase are best left until you have had a chance to look at them. Recommended reference texts (provided in the modules below) will be available in the library and/or as e-books or online.
Course Inductions:

1. Introduction to the Core Course

*Dr Bill Sheate and Dr Caroline Howe (Core Course Co-Directors), Dr Mike Tennant (MSc Director)*

Philosophy and approach to teaching and learning at Masters level – how to get the most out of the Core Course (including the social aspects of the Policy Seminars); the aims and objectives of the Core Course. Structure and purpose of the Core Course modules and their assessments: Human World, Nature World, Human/Natural Interactions, Becoming an Independent Learner. The live webinar session also includes an Introduction to Blackboard (Virtual Learning Environment), where all electronic teaching materials, e.g. PowerPoint slides, and links to online video lecture material, MS Teams for live Q&A sessions can be found and where assignments are to be submitted.

See [https://bb.imperial.ac.uk/](https://bb.imperial.ac.uk/) (for Blackboard) and [https://www.imperial.ac.uk/students/success-guide/pgt/](https://www.imperial.ac.uk/students/success-guide/pgt/) for Imperial College Success Guide for Master’s Students.

2. Introduction to Careers and Alumni

*Dr Bill Sheate (Core Course Co-Director and Director of Careers)*

*Becky Guppy (Careers Service)*

This short **Online Video** introduces the support available through the Careers Service and the department in relation to Careers, including one to one clinic sessions on CVs and internships, individual careers advice, careers seminars and events. It also includes an introduction to probably the greatest resources of the MSc, its past students – the alumni, including a regular email list server of jobs and opportunities, as well as an Alumni mentoring scheme where current students can be matched to alumni.

3. Introduction to ICT - Online video/web resources

*ICT staff*

All you need to know about access computing and online resources inside and outside College.

4. Introduction to Health & Safety - Online video and live Q&A sessions

*(Stephan Hoyle and others)*

It is **compulsory** for all students to follow the online induction - a register of completion will be taken.
See

5. Student Hustings and Elections

*Dr Bill Sheate and Dr Caroline Howe*

Student representatives for the year will be elected through Imperial College Union online voting. The *hustings* session provides an opportunity for anyone wishing to stand for election to speak to the other students and ‘sell’ themselves (‘hustings’)! Just to say why you would like to be a student rep and why others should vote for you. The Union organises the online voting https://www.imperialcollegeunion.org/elections/our-election-system using the single transferable vote system.

Volunteers are also sought to act as ICTcomputing representatives to liaise with ICT services in College, and to serve on other CEP Committees.
Human World Module  
*Coordinators: Professor Clive Potter, Dr Bill Sheate*

Environmental sustainability is both enabled and constrained by policy, regulation, law and economics: and through the processes of governance enacted by multiple stakeholders – government, business, communities and publics of different kinds. This module presents key aspects of these socially-oriented disciplines to provide the core principles for understanding the socio-economic basis for many environmental problems. It aims to demonstrate how the use of the environment can be influenced by well-designed tools and management policies. It includes key principles, theories, applications and case studies of environmental policy and decision-making, environmental economics, and environmental law.

The learning approach for this module includes interactive lecture sessions and group work. Content will be delivered primarily though problem-based, research-led learning, supported by interactive and flipped lectures, relevant reading, case studies and study skills. You will develop a group project building on small group seminar topics to explore policy, economic and regulatory perspectives.

**Learning Outcomes:**

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

1. understand and critically apply the principles underpinning the social, economic and policy dimensions of environmental change and management (1, 2)
2. critically engage with and analyse the legitimacy of different knowledge claims and stakeholder perspectives (4)
3. critically analyse, synthesise and evaluate knowledge relating to environmental governance and management (5);
4. identify trade-offs in problem solutions and understand how to mitigate them (7; 8)
5. work effectively individually and in groups to develop creative solutions to contemporary sustainability problems (11, 7)

*(numbers = relevant programme LOs)*

**Module assessment:**

The module is assessed through a Group work *poster* presentation (10%) and *video* presentation (10%), both with weighted peer assessment. Your group performance will be assessed by your peers as described in the Assessment section.

After you have submitted your individual Small Group Seminar (SGS) essays you will work with your SGS group to synthesise your individual findings and identify a specific problem that you feel is important to tackle. You will then need to develop policy recommendations that will be delivered as a video and a poster presentation. You will be expected to actively contribute to group work and will not be expected to do any more library research.
Your audience for the policy recommendations is a group of non-specialist policy makers. You should create a video and poster that responds to each of the points below.

1. A critical analysis of the situation, including practical, institutional, social and historical context as appropriate.
2. A clear and precise problem statement based on the above analysis.
3. Three clear, precise and relevant policy recommendations that convincingly justify the benefits to society, how they will bring about change, and the resources needed. One recommendation should be based on regulation (possibly drawn from Zen’s law lectures) and one on market-based instruments (possibly drawn from Yiannis’s economics lectures).
4. The feasibility of the recommendations should be described in terms of practicality, cost-effectiveness and social acceptance.
5. Trade-offs should be clearly identified and mitigation steps described.
6. The video and poster presentations should be visually engaging. The narrative should be clear, pitched appropriately and contain well-structured and coherent arguments throughout.

Overview of module

*Environmental Policy*

**HW1:** Governing Sustainability 1: Key concepts and influential discourses

**HW2:** Governing Sustainability 2: Green consumers, environmental citizens and the policy process

**HW3:** The Science-Policy Interface – Bovine TB case study; science as evidence

**HW4:** The ‘policy cycle’: how policy is made and implemented in practice

*Environmental Economics*

**HW5:** Environmental Economics 1: Market Failure

**HW6:** Environmental Economics 2: Pollution Control

**HW7:** Environmental Economics 3: Environmental Valuation

**HW8:** Environmental Economics 4: The Economy and the Environment

**HW9:** Environmental Economics 5: Income and Environmental Quality

*Environmental Economics Online Surgery 1 & 2*: these are available for discussion and exploration of issues as they emerge.

*Environmental Law*

**HW10:** Environmental Law - Structure, Sources and Remedies

**HW11:** Enforcement of Environmental Law Criminal and Otherwise
**HW12:** EU Environmental Law – The Treaty for European Union (TFEU), Case Law and the Environmental Acquis

**HW13:** Human World 12: International Economic Law and the Environment - The Absence of Environmental Protection?

**HW14:** Human World 13: Addressing Climate Change through Law - The Climate Change Convention, Kyoto, Copenhagen and Paris

**HW15:** Climate Change Policy

**Environmental Law Online Surgery 1 & 2:** these are available for discussion and exploration of issues as they emerge.

**Pre-course reading:**

Three short books were recommended for pre-course reading, if you were unfamiliar with environmental policy, economics or law, but these are also an excellent starting point for background reading to this module.

*Environmental Policy*


*Environmental Economics*


*Environmental Law*


**Reading**

Many, if not all, sessions in the HW module will require some directed pre-session reading so you can become familiar with key concepts and principles in order to get the most out of the lectures/interactive sessions. These readings are available via Leganto/Blackboard, and you should check these regularly to ensure you know what to look at in advance and for follow-up. Where there is wider suggested reading you must make your own judgement about how much is appropriate for you, balancing with the other demands of the course. Some suggested reading will be for you to follow up depending on your own area of interest and are not essential.
Human World Module Programme

The module begins with Environmental Policy (four sessions), before moving on to Environmental Economics (five sessions) and environmental law (five sessions):

Environmental Policy

Human World 1: Governing Sustainability (1): Key concepts and influential discourses

Clive Potter

In this first lecture session, you will be introduced to the concept of environmental governance and the challenges facing governments in managing the long and difficult transition to sustainability. The session begins with a discussion of what environmental governance is and why the state remains an important player in attempts to promote sustainability, both domestically and internationally. We will then look specifically at the relative contribution made by state action, market processes and community engagement in addressing environmental conflicts and common property management issues, identifying the way these different types of intervention have developed, advocated and applied in recent years.

Suggested reading:


A good, if slightly basic text which nevertheless gives a useful overview of the different components of environmental policy in practice and the role of publics and stakeholders in the policy process.


A core text which offers a very good overview of the processes and outcomes of contemporary environmental governance. You should especially look at Chapters 1, 3 and 13.


Wide-ranging text which reviews some of the key ideas and discourses behind environmentalism and presents a critical analysis of sustainable development as a policy idea

Human World 2: Governing Sustainability (2): Green consumers, environmental citizens and the policy process

Clive Potter

Taking up themes identified in the opening lecture, this session begins by comparing different understandings of the transition to sustainability and the role of citizens and consumers in this process. While a sustainable society is unlikely to be achieved without radical changes to consumption, it is less clear that the individualisation of responsibility that ‘green consumption’ implies will be sufficient. The lecture goes on to critique some of the assumptions behind the idea of ethical consumption, the values-action gap and the problem of rebound effects before moving on to discuss how far a change in the politics of the environment is needed in order to properly address the structural barriers to sustainability. The lecture concludes by reflecting on the potential for a new politics of the environment, rooted in the idea of deliberative democracy and environmental citizenship.
**Suggested reading:**

See Blackboard/Leganto for further references on the green consumer and environmental citizenship, including the following:


*An accessible and provocative book which argues that wealth is not an end in itself but a means to the achievement and maintenance of a `good life`. Discusses the relevance of `Happiness Studies`, human wellbeing and the environmental impact of our ever-growing need to consume.*

**Human World 3: The Science-Policy Interface – Bovine TB case study**

*Bill Sheate*

In an era of so-called evidence-based policy making, this session looks at the nature of the science-policy interface. Employing a case study on *bovine tuberculosis (bTB)* in cattle and badgers we will explore the challenge of working at the interface between science (scientific evidence) and policy making. How does policy making work when science is contested, for example, or under conditions of uncertainty? The session considers the different purposes and disciplines of science and policy and explores our understandings of knowledge (e.g. ‘expert’, ‘lay’ etc.), what constitutes evidence and how this is used in policy making. It also highlights the importance of ‘values’ and power, as well as relevance of an interdisciplinary approach to environmental policy. You will need to look at some opposing position statements in advance of the Live Q&A session (see reading below) to engage in the session.

**Pre-session reading:**

See Blackboard/Leganto for documents on bovine tuberculosis and badgers – please familiarise yourself with key issues from different perspectives, e.g. farmers, wildlife NGOs etc


Newman, J (2017), Deconstructing the debate over evidence-based policy, *Critical Policy Studies*, 11:2, 211-226,
Human World 4: The ‘policy cycle’: how policy is made and implemented in practice

Bill Sheate

Exploring the so-called ‘policy cycle’, this session examines the difference between theory and reality, and an alternative conception of ‘system stewardship’ where policy is in a constant process of development and testing. Governance, decision-making and appraisal at a variety of hierarchical levels will be explored, from high level policy, including tools for options appraisal (ex ante) and evaluation (ex post) through to plans and programmes (e.g. at municipality level) down to project level environmental and sustainability assessment (from SEA to EIA). In this way a range of assessment and evaluation tools are introduced and their utility discussed. How can decision-making and policy-making be supported by upfront assessment tools and how can we know how effective policy interventions actually are in practice (evaluation). Central to all these tools is the concept of accountability – the extent to which assessment and evaluation processes can help to support democratic, corporate and professional accountability – and particularly the role of the public, stakeholders and NGOs.

This session sets out the policy and tool landscape of ex ante and ex post appraisal tools and some key principles and approaches for application; the detail of individual tools is for you to explore in your own time with the readings given. Real-life case studies and the lessons that can be learned from them at project EIA level (e.g. controversial road and rail schemes), at programme/plan SEA level (national level sectoral plans/strategies), and at policy level (evaluation of policy interventions) will be provided. The session explores why we need these tools to support decision-making and policy making and the challenges these bring.

Pre-session reading:


Further reading:

See Blackboard for specific supporting documents on EIA, SEA and evaluation as well as links to other assessment and management tools.


Environmental Economics

Human World 5: Market Failure

Yiannis Kountouris

In this lecture we will introduce environmental problems in relation to market imperfections. We will discuss externalities, public goods and common property.

Suggested readings:

Field, B.C., Field, M.K. *Environmental Economics*. Chapter 4

Human World 6: Pollution Control

Yiannis Kountouris

This lecture will analyse the problem of pollution control in the context of the Marginal Abatement Cost – Marginal Damage framework. We will introduce policy instruments for managing pollution including charges and tradeable permits and discuss their implications.

Suggested readings:

Field, B. Field M. *Environmental Economics*. Chapters 5-6 and 9-13
Hanley, N., Shogren, J., White,B. Introduction to environmental Economics. Chapter 2
Human World 7: Environmental Valuation

Yiannis Kountouris

In this lecture we will discuss the problem of monetizing environmental goods and services that are not traded in markets. We will introduce concepts of value, revealed and stated preference environmental valuation approaches and discuss their merits and limitations.

Suggested readings:

Hanley, N., Shogren, J., White, B. Introduction to Environmental Economics. Chapter 3

Human World 8: The Economy and the Environment

Yiannis Kountouris

This lecture will take a broader view on the relationship between the economy and the natural environment. We will discuss issues around the environment and growth, the impact of environmental regulation on economic activity and the influence of environmental resources on economic development.

Suggested readings:


**General Readings**

Asafu-Adjaye, J. *Environmental Economics for Non-Economists*


**HW9: Environmental Economics 5: Income and Environmental Quality**

*Yiannis Kountouris*

Details to be confirmed.

**Environmental Law**

Environmental law provides a significant framework within which environmental issues can be understood, managed and resolved. These sessions provide an understanding of the structure of environmental law, with focal points upon the UK, aspects of the European Union (EU or EC) and international law. Their aim is to provide insight into the contribution of the law (i.e., the rules that guide and govern civil society) to environmental problems as they intersect with science, economics and policy. As such, environmental problem solving will be tackled directly through participatory learning employing the Harvard case and Socratic methods. The comparative value of EU environmental law (including UK applications) to other jurisdictions is an accepted part of our methodology noting the world-leading status of EU environmental law.

**Human World 10: Environmental Law - Structure, Sources and Remedies**

*Zen Makuch*

This session offers a summary of the content of the course. It is followed by an explanation of the structure and sources of environmental law. There will be a particular focus on the legal regime found in the United Kingdom. This will be
contrasted with the use of economic instruments and voluntary agreements. The roots of environmental law reach more deeply than the “flower power” generation of legislative change that began in 1969. Equally, the strength of the United Kingdom as the mother of the Common Law is illustrated in the use of her private law remedies for environmental protection efforts worldwide. This session will bring the law to life through the illustration of practical “private law” remedies for addressing environment and human health-related harm. In this regard, together we will argue and resolve a landmark case in domestic water damage.

Human World 11: Enforcement of Environmental Law Criminal and Otherwise
Zen Makuch

Enforcement activity is a key means by which environmental protection efforts maintain their legitimacy. It is a significant litmus test for measuring societal environmental commitments. Yet, little is generally known about the actual methodology for developing and successfully prosecuting an environmental case. This session provides an in-depth account of this process, illustrating how the "sharp end of the enforcement stick" works in practice. The case that we will argue concerns criminal damage to land.

Human World 12: EU Environmental Law – The Treaty for European Union (TFEU), Case Law and the Environmental Acquis
Zen Makuch

It is with increasing frequency that the environmental law of the European Union (EU) is the main driver of environmental protection efforts in Member States. The United Kingdom is no exception. This session will trace the key elements of EU law with specific reference to the TFEU, the case law of the European Court of Justice and the body of environmental legislation known as the "Environmental Acquis" Communautaire. The landmark decision that we will address concerns how environmental law is to be reconciled with business interests.

Human World 13: International Economic Law and the Environment - The Absence of Environmental Protection?
Zen Makuch

In the aftermath of our General Agreement on Tariffs and Trade (GATT) Uruguay Round international trade negotiations, there was great hope that environmental law goals would be integrated into domestic and commercial trade policy. The same hope applied to all international institutions in the wake of the UN Conference on Environment and Development. This goal has yet to be realised. International institutions (i.e., the WTO) regulate approximately 20 billion pounds sterling (2018) in commercial/industrial activity annually and yet they are without a sound environmental law basis. This session addresses this issue by reference to direct
experience with contemporary international disputes to protect the environment. The specific legislation concerns environmental problem solving and marine biodiversity.

**Human World 14: Addressing Climate Change through Law - The Climate Change Convention, Kyoto, Copenhagen and Paris**

*Zen Makuch*

As with many issues that arise in contemporary public law, particularly those draped in the language of “crisis”, there is a tendency to introduce “quick fix” regulatory solutions. What the evolving climate change debate has taught us is that, for the foreseeable future, environment, energy and sustainability will remain as enduring challenges for civil society locally and globally. Borrowing upon the direct experience of negotiating international law addressing climate change, after an introduction to key legal language and emerging case law, we will turn to regulatory efforts at the international, EU and Member State levels in order to stabilise climate change. In particular, implementation strategy will be examined as the backdrop for positing legally codified solutions to the climate change problematic. Our particular challenge here will be in addressing stakeholder conflict over transport and greenhouse gas emissions in a North and South context.

**Sources and Materials**

Everything that you need to rely upon in respect of core reading, will be provided by me in an Environmental Law Handbook that I give to you and materials posted on Blackboard. If you want to learn even more then you can look at:


*In England, this is the leading textbook on the subject of environmental law.*

What is below is not a replacement for Bell and McGillivray:

- **P. Sands and J. Peel, Principles of International Environmental Law (CUP, 2018)**

  *This textbook specifically covers international environmental law with reference to key treaties. It also provides the background and development of said law and principles with a sense of where international environmental law is headed.*


  *This is a short, simple introduction to the subject of environmental law, used as pre-course reading for first degrees. It has a “sound references and further reading” section.*

**Selected Information and Sources on Environmental Law in the UK**

1. Introduction

As between England and Wales, environmental law is highly similar in nature though the Welsh “yes” vote on devolution of powers to Wales (including the power to make environmental legislation) gives rise to minor changes in circumstances. Environmental law in Scotland and Northern Ireland is different to that of England and Wales as the former two legislative assemblies pass regulations that are particular to their respective jurisdictions. The relationships between these nations may well change in relation to environmental law depending upon how Brexit plays out in politics.
2. Practical Law: A Thomson Reuters Legal Solution - Environmental law and practice in the UK

http://uk.practicallaw.com/6-503-1654?source=relatedcontent

This is a Question and Answer (Q&A) Guide to environmental law in England and Wales.

This Q&A Guide provides a high level overview of environment law in the UK (England and Wales) and looks at key practical issues including emissions to air and water, environmental impact assessments, waste, contaminated land, and environmental issues in transactions. In addition, answers to questions can be compared across a number of jurisdictions to assist in the management of cross-border transactions.

3. United Kingdom Environmental Law Association

http://www.environmentlaw.org.uk/

This resource is entitled “Law and Your Environment, the plain guide to Environmental Law” covering England, Scotland and Wales. It provides guidance on how to address environmental problems. It tells you where to turn to for help, who the responsible authority is, how the legal process looks and can show you what legislation is relevant. You can find out where to go for help, who the regulator is and how to approach them, how the legal system works, and follow links to the original laws.

4. Law Locator:

http://www.environmentlaw.org.uk/rte.asp?id=179

Uses a topic search index to help you find relevant legislation for England and other jurisdictions.

5. Environmental Regulations – GOV.UK

https://www.gov.uk/browse/business/waste-environment/environmental-regulations

Guidance on legislation based on conservation and sustainability, and aimed at reducing air, water and land pollution, carbon emissions and energy use. Provides many URLs linked to particular environmental regulation issues.

6. All Things Brexit and Environmental Law

https://www.ukela.org/brexit

Recent guidance on what Brexit means for UK environmental law, the big debates and the future potential paths as Brexit unfolds in all of its hope and glory (perhaps a better term is uncertainty).

Human World 15: Climate Change Policy

Dr Raphael Slade and Dr Renee van Diemen

We will explore International Climate Change Policy from the perspective of senior scientists located within the IPCC Working Group III Technical Support Unit, based in CEP. Working Group III covers the mitigation of climate change, i.e. methods for reducing emissions of greenhouse gases and enhancing atmospheric sinks.
Natural World module

Co-ordinators: Dr Caroline Howe and Dr Tilly Collins

The Natural World module provides the ecological, scientific and context for environmental challenges. In this module, you will be exposed to the core principles necessary for understanding the natural world, covering ecological theory, ecosystems, natural resources, including water, land and air, and biodiversity. It will allow you to bring these together to understand complex concepts such as climate change and planetary boundaries. It is complementary to the Human World module and feeds into the interdisciplinary Natural/Human Interactions module.

The learning approach for this module combines lectures, problem-based case studies and group work. Research-led learning is supported by interactive and non-classroom-based learning covering key principles, theories and applications; computer-lab practical sessions; problem-based case studies exploring real-world sustainability problems and solutions and study skills.

Learning Outcomes

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

1. Demonstrate a critical understanding of sustainability from a range of perspectives relevant to environmental technology (1, 2, 3, 6, 7);
2. Infer and assess the impact of human/environment interactions (6);
3. Critically analyse, synthesise and evaluate the breadth of natural resource-based sustainability issues (1, 2, 5);
4. Critically apply relevant statistical concepts and quantitative skills for evaluating uncertainty (3, 6);
5. Effectively work individually and in groups to research, deliver and communicate high quality analyses using a range of media (9).

Module assessment

Formative assessment (supports learning)

Online quiz to provide feedback on understanding of quantitative skills taught during the module. This will be a part-technical and part-interpretative multiple-choice question assignment around simple population models that support learning outcomes from Ecology Theory (NW3 and NW4). When completed you will gain access to correct and expanded answers that provide further information to support your learning for this module and the Becoming and Independent Learner (BIL) module. This assessment will be available online via Blackboard throughout the Core Course.
**Summative Assessment (assessed)**

This will take the form of a group concept map of a contemporary natural environment/sustainability issue. Learning Groups will be provided with an individual question on the management of different environmental resources across the globe. Groups will be expected to frame the problem within the context of sustainability, to identify relevant stakeholder and understand how to balance their competing requirements with respect to climate change, ecosystem services and the Sustainable Development Goals. The output will be a formal document presenting the concept map accompanied by 1000 words (max) policy document that draws conclusions from the map and provides local and practical policy recommendations. An introduction to the assessment and the allocation of group topics will be provided in lecture NW4. We will use Lucidchart for the Natural World Assignment: [https://www.lucidchart.com/pages/concept-map](https://www.lucidchart.com/pages/concept-map). Marking will be through both peer assessment and academic assessment of the group project as a whole. This contributes 35% of the term marks.

**Pre-reading**


**Overview of module**

**NW1**: Ecosystems and Climate and Environmental Change  
**NW2**: Agriculture and the Natural World: Challenges and Solutions  
**NW3**: Biodiversity and Ecosystem Services  
**NW4**: A Practical Guide to Concept Mapping (including introduction to NW assessment)  
**NW5**: Demography  
**NW6**: Ecology Theory 1: Individuals and Populations  
**NW7**: Ecology Theory 2: Communities and Measurement  
**NW8**: Fisheries
Reading

Many, if not all, sessions in the NW module will require some directed reading so you can become familiar with key concepts and principles in order to get the most of the pre-recorded lectures/interactive sessions. These readings are available via Leganto/Blackboard and you should check these regularly to ensure you know what to look at in advance and for follow-up. Where there is wider suggested reading you must make your own judgement about how much is appropriate for you, balancing with the other demands of the course. Some suggested reading will be for you to follow up depending on your own area of interest and are not essential.

Lectures

**NW1: Ecosystems and Climate and Environmental Change**

*Dr Alexandra Collins and Dr Maria Vinograd*

Whilst ecosystems, interconnected system of biotic and abiotic factors, are dynamic entities, able to respond and recover from periodic disturbances, human activities can affect the processes, functions and ultimately the services ecosystems provide. This lecture will build on pre-session material to recap on what ecosystems are and the natural processes that affect their functioning. It will then discuss how human activities have altered those processes through environmental and climatic change and consider some of the approaches that could be used to understand and manage these.

Further Reading

- [http://science.sciencemag.org/content/302/5652/1907.full](http://science.sciencemag.org/content/302/5652/1907.full)
NW2: Agriculture and the Natural World: Challenges and Solutions

Dr Alexandra Collins and Dr Maria Vinograd

Agriculture, the cultivation and breeding of animals, plants and fungi for products used to sustain and enhance human life, presents numerous environmental challenges. This lecture will examine the impact of agricultural production on the natural world and discuss some of the considerations necessary to address these, crucially with a critical view of the associated social and political challenges.

Reading

NW3: Biodiversity and Ecosystem Services

Dr Caroline Howe

This session discusses the concept of ecosystem services and human well-being and their framing within international policies and agreements. It explores how the framing of the relationship between nature and people has evolved over the last twenty years culminating with the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) and looking forward to the Convention on Biological Diversity 2050 Vision for Biodiversity. It explores the contribution that these global frameworks/programmes have had on both biodiversity and human wellbeing.

NW4: A Practical Guide to Concept Mapping (including introduction to NW assessment)

Dr Mike Tennant and Dr Bill Sheate

A Concept map is a modelling tool that allows you to organise your knowledge in a simple, graphical way and show how ideas are related. Used well, they allow you to accurately describe the context in which problems are set. This, in turn, allows you to make more informed decisions about management and policy interventions.

The assessed work for the Natural World module is a group-based concept map that describes the context around a particular ecological management question. In this session we will show you how to develop concept maps and how these can be applied to practical applications. We will use Lucidchart for the Natural World Assignment: https://www.lucidchart.com/pages/concept-map

Pre-reading
NW5: Demography

Prof. John Mumford (1hr lecture online + 1hr Q&A live)

Demography is a key driver of environmental change. We need to understand the criteria that determine appropriate demographic objectives and the factors that can potentially be managed to achieve them. Population size, age structure, distribution and migration are important factors to recognise. Many population changes can be predicted at least a generation ahead and these predictions give society an opportunity to plan more effectively for future needs and opportunities.

Pre-reading


NW6: Ecology Theory 1: Individuals and Populations

Dr Tilly Collins

This session will cover the foundations of Ecology as a Science and outline some of the most important concepts that are thought to explain the abundance and distribution of species. We will also use this session to examine relevant population models which help us to understand intra- and inter-specific competition and thus some of the life-history strategies and patterns of occurrence that we see in the natural world.

NW7: Ecology Theory 2: Communities and Measurement

Dr Tilly Collins

In order to be able to evaluate changes in biodiversity and patterns of biodiversity around the world, we need to first understand and set the boundaries for scale and system definition. This session will consider what we understand by an ecological community, what we can use in formulating comparable (through time and space) measures of biodiversity.

NW8: Fisheries management

Prof. John Mumford (1hr lecture online + 1hr Q&A live)

Fisheries are an important ecological system with unique properties of multitrophic levels, major uncertainties around stock assessment, and in many cases multiple competing national and sectoral interests. With the current high levels of exploitation these systems are very sensitive to mismanagement, which is further complicated by efforts to manage them with multiple ecological, economic and social objectives. Aquaculture is rapidly increasing as an alternative to traditional capture fisheries but brings new problems as well as offering solutions to food demands.
Pre-reading


http://dx.doi.org/10.1016/j.marpol.2014.03.010

NW9: Risk (and Fisheries example)

Prof. John Mumford (1hr lecture online + 2hr practical + 1hr Q&A live)

Environmental management must address risk and uncertainty. Understanding risk concepts supports more effective management of uncertainties. The lecture introduces key concepts and the practical exercise. The practical exercise links to issues in fisheries management (NW8) illustrates how risk (in a fisheries example) can be modelled and how such uncertainty-focussed models can be used to analyse the effect risk has on the outcomes under different management strategies.

Pre-reading

Van der Bles et al. (2019) Communicating uncertainty about facts, numbers and science. Royal Society Open Science, 6:181870  
https://royalsocietypublishing.org/doi/10.1098/rsos.181870

http://dx.doi.org/10.1016/j.marpol.2014.03.010

NW10: Risk (Psychology and quantification of risk)

Prof. Mark Burgman (1hr lecture + 2hr practical)

Expert judgement is unavoidable when data and understanding are poor and decisions are imminent, which is often the case in environmental management. Human reasoning is poorly prepared to assess risks, even those that affect us personally. Judgements about the probabilities of future events are influenced by a raft of things that have nothing to do with the event’s likelihood, such as our level of familiarity with similar circumstances and the degree of control we believe we have over the process. This session will outline the most pervasive and influential of the psychological and contextual biases that colour scientific judgements. It introduces some simple and effective strategies to mitigate them. During the practical exercise, it will explore the potential strength of some of these biases and the effectiveness of mitigating actions. The outcome will be that you will be better prepared to make sound environmental judgements.
Pre-reading


NW11: The Human Water Cycle: Potable Water and Wastewater Treatment

Prof. Nick Voulvoulis

Our increasing need for water is forcing us to examine how humans are impacting our water supply – how we obtain, use and dispose of water. Societies have come to depend on a reliable supply of water, and if that’s disrupted in any way, there are big social and economic consequences. The human water cycle describes how humans get, use and reuse water. The water that we drink comes from lakes, rivers, streams, glaciers, and even groundwater. It is treated and piped to our homes, flowing out from taps for our usage. Used water then goes down the drain and is transported to the sewer system, which brings it to wastewater treatment plants where organic carbon and nutrients are removed before it can be safely release back into the environment. The way we use water is a cycle, where cleaned wastewater ends up in one of the same places that we get our drinking water.

NW12: Air Pollution and Health

Dr Audrey de Nazelle

The goal of this lecture is for students to gain an appreciation of the complexity of air pollution regulation and research. It will include discussions on regulatory processes, the appropriate use of tools and data, the pathways to exposure and health, and solutions to air pollution and health problems.

Pre-reading

2. https://www.youtube.com/watch?time_continue=8&v=GVBeY1jSG9Y
3. Royal College of Physicians and Royal college of paediatrics and child health (2016) Every breath we take: the lifelong impact of air pollution; https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution
NW13: Chemicals in the Environment: Environmental Toxicology and Human Health

Prof. Nick Voulvoulis

The impact of toxic chemicals on wildlife and humans has been of great concern for the last fifty years. It is a very large, complex subject area and this is intended to give an introduction to fundamental aspects of how some pollutants interact with living organisms to cause deleterious effects. The main outcomes of this session are that you should have an appreciation of the wide range of contemporary issues that are caused by toxic chemicals in the environment and what regulatory authorities are doing to monitor and control them. You should understand the main hazards that toxic chemicals pose and how risk to humans and wildlife is controlled. You should be aware of the main groups of pollutants of contemporary concern.

NW14: Urban ecology

Dr Tilly Collins

With the increasing urbanisation of human populations, we need to understand how to integrate and maximise the benefits of elements of ‘natural’ ecosystems to the urban landscape. Managing these elements in order for people to benefit optimally from the ecosystem services they provide to the citiescape sits firmly in the context of human ecology and the flows of people and their requirements in high-density urban areas.

NW15: Waste and Resources Management: Consumerism and Overconsumption

Prof. Nick Voulvoulis

Natural resources, including materials, water, energy and fertile land, are the basis for our life on Earth. However, humanity’s rapidly growing consumption of these resources is causing severe damage: the climate is changing; freshwater reserves, fish stocks and forests are shrinking; fertile land is being destroyed and species are becoming extinct. Current global development is characterised by increasing resource use and results in massive waste; in the fast-moving consumer goods sector alone, about 80% of the $3.2 trillion material value is lost irrecoverably each year. Waste management refers to the many methods and processes of dealing with waste at every stage from generation and collection through to final disposal. Understanding the appropriate methods for the management of solid waste is closely related to the characteristics of the waste and therefore to its source. The main outcome of this session is for you to appreciate the current transition from waste to resources management and the role of consumerism and overconsumption.
The aim of this session is to enable you to develop an integrated approach to the interplay between economic growth, production and consumption and resource extraction in the context of sustainability, and introduce three aspects: resource efficiency, decoupling and the circular economy. Meeting humanity’s rapidly growing consumption needs, with finite resources on a planet that is already under stress, requires more than greater resource efficiency. With three billion new middle-class consumers anticipated by 2030, new business models must be explored if we are to continue to thrive on this planet. One solution may be to move from a linear economy (of make, use and dispose) to a circular economy that seeks to eliminate losses and decouple economic growth from resource consumption. This shift is not just necessary but also incredibly complex.
Human/Natural Interface module
Co-ordinators: Dr Mike Tennant and Dr Caroline Howe

The aim of the Human/Natural Interface (HNI) module is help you understand sustainability from an interdisciplinary perspective. In the core course these interdisciplinary skills are developed explicitly in the Small Group Seminar Series, the Policy Seminars and a set of interdisciplinary case studies.

Learning outcomes

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

- critically analyse the legitimacy of different knowledge claims and understand how they may be effectively combined to tackle sustainability problems
- infer and assess the impact of human-environment interactions
- identify trade-offs in problem solutions and understand how to mitigate them
- work effectively individually and in groups to develop creative solutions to contemporary sustainability problems

Module Assessment

The HNI module is assessed through an essay based on your Small Group Seminar library research (10% of the term marks) and an end of term integrating essay (35%). You must pass this module or you will have to resit all or part of it.

Small Group Seminars

The Small Group Seminar series (SGS) allows you to take part in small-scale library research and policy development. You will get the opportunity to work with 4-5 other students and one of our staff members on a contemporary environmental science and policy issue.

You will have the opportunity to choose from a number of topics and conduct individual research and group discussions. You will then work in a group to create a set of policy recommendations based on a synthesis of your individual research and create a group video and poster.

Aims

The SGS series will give you an introduction to some of the research skills that are necessary for understanding any sustainability problem. You will be expected to undertake rigorous library searching, discuss this in a group, and then work collaboratively to synthesis your findings. Emphasis is placed on active learning, participation, and the application of critical thinking. You will be expected to lead discussions based on the research topic you choose to do, with the staff member facilitating discussion.

The SGS series will allow you to develop higher-order learning skills – analysis, synthesis and evaluation – and their application to environmental and sustainability issues.
• The first session will involve general discussion around the topic, and identify topics for independent research by the student (analysis).
• The second session will focus on the presentation of initial results and further discussion (synthesis).
• The third session will be consolidate further findings and allow you to draw conclusions on the topic in question (evaluation).
• In the fourth session you will work to decide on a topic common to your individual research that you can work on as a group for the poster and video presentation in the Human World module.

The SGS series comprises 3 x 1.5 hour sessions spread over weeks 2-4. You will be able to choose from a number of topics on issues in contemporary environmental science and policy. Places are limited on each seminar, and you will need to sign up on Blackboard to register your choices. You will then be allocated to one of your preferred seminar topics, on the basis of a ‘maximising happiness’ algorithm which seeks to give everyone their highest preference possible. This is a much fairer way of allocation than the alternative of first come first served. There will be a wide variety of seminar topics so you should have no difficulty in finding a number that will interest you.

**SGS Assessment**

After the final session you will each be expected to submit an individual essay on your research (max 2000 words, excluding references). As a guide the essay should:

• have with a clear aim
• be based on a well-argued, critical literature review that explores the problem and the context in which it is set
• contain a strong conclusion based on your evaluation of the literature
• be well-written, with references correctly formatted in Harvard style

After you have submitted your individual essays your SGS group will work together to synthesise your individual findings and identify a specific problem that you feel is important to tackle. You will then need to develop policy recommendations that will be delivered as a video and a poster presentation. More information about this can be found in the section on the Human World module.

**Policy Seminars**

On most Thursday evenings during the first two terms we host a series of “Policy Seminars”. These provide you with an opportunity to see how the more academic side of sustainability that you learn during the day is translated into practice. The seminars are delivered by a range of speakers from areas including government, industry and non-government organisations who come to talk about their particular involvement in the environmental field. External speakers range from international experts to course alumni, with their contribution ensuring coverage of current issues, the possibility of placement-style dissertation research and an invaluable source of job announcements.
These seminars form part of the HNI model and your attendance is expected. They will allow you develop a more nuanced and practical understanding of sustainability problem-solving as well as help you develop your thinking for the end of term integrating essay. They are also great social value, providing a prime opportunity for informal socialising and networking. The programme is available on Blackboard and the CEP website.

**Interdisciplinary Case Studies**
You will be presented with a number of case studies that represent ongoing research programmes in the CEP, hear from a range of lecturers and be given some supplementary material to understand. This will allow you to see how sustainability problems are strongly embedded into the network of sustainable development goals (SDGs). We will introduce you to decision-making tools that you can use to tackle problems that are characterised by uncertainty and where solutions may seem ambiguous.

You will learn about interdisciplinary thinking and decision-making through a short series of lectures and workshops at the start of the HNI module. You will then cover three sustainability case studies delivered by staff and will work on a fourth case study independently in your learning groups. This will prepare you for writing your end-of-term integrating essay.

The case studies run between weeks 7 – 10, with a single topic tackled each week. There will normally be a number of lectures on the Monday, complemented by supporting material for you to read or watch. You will be set a question to discuss in your learning groups over the week in preparation for a full class debate on the Friday.

The structure of the series is illustrated below:

![Diagram](image)

**HNI1: Interdisciplinarity in Theory and Practice**

*Dr Mike Tennant*

In this lecture we will explore what it means to be interdisciplinary. This term has a number of different definitions and so can be applied in different ways. We will
discuss some of those definitions, some of the tools that can be used to understand interdisciplinary thinking and research, and show how these have been used in practice.

**Key Resources**

The Association of Interdisciplinary Studies has a good guide that will help you understand many of the concepts used when thinking about interdisciplinarity. You can access that here: [https://sites.google.com/a/ualberta.ca/rick-szostak/research/about-interdisciplinarity](https://sites.google.com/a/ualberta.ca/rick-szostak/research/about-interdisciplinarity). The section on “Interdisciplinary Best Practices” is of particular note.


**HNI2: Understanding the Sustainable Development Goals as an Interdisciplinary Problem**

*Dr Caroline Howe*

This session introduces the concept of sustainable development as an interdisciplinary problem. It looks at the evolution of the Sustainable Development Goals (SDGs) within the context of environmental/sustainability governance and the role of global goals for international cooperation with respect to global megatrends, such as climate change and human demographic changes. The session will review the potential interactions, synergies and trade-offs between the individual goals and the challenges and opportunities the SDGs present.

**Pre-reading**


**Additional reading:**


**HN13: Interdisciplinary problem solving**

*Prof. Nick Voulvoulis*

Interdisciplinary problem solving is an innovation that permits leaders to address complex problems more rationally, practically, and morally than use of traditional
disciplinary methods. The approach focuses inquiry on “defining” the problem at hand and understanding its context in terms of the human social and decision process at play. For this, Gap Analysis, a process that compares actual performance or results with what was expected or desired or the Source, Pathway, Receptor model, can be used to structure problems and understand sustainability problems from a systems perspective. These methods provide conceptual frameworks for defining problems and ways to identify suboptimal or missing strategies, structures, capabilities, processes, practices, technologies or skills, and then identify steps that will help reach sustainability.

**HNI4: Making Decisions for Complex Issues**

*Prof. Mark Burgman*

Decisions inevitably involve trade-offs between competing objectives and different values. In the afternoon session, we will explore the foundations of making decisions in realistic circumstances using a case study. We will develop new skills for creating a framework for representing the values at stake in a decision. Then, we will work through techniques for identifying and reconciling different positions and priorities. Finally, we will work through how to find a solution to complex problems involving stakeholders that is satisfactory, and is likely to find broad community support.


**HNI Case Studies**

The three taught case studies will allow you to develop your skills in analysing, evaluating and communicating interdisciplinary issues. The three topics you will cover for the 2019/2020 year will focus on “Getting to Net Zero”, “Sustainable Diets” and “Vector Control”. For each case study you will have a series of lectures and some supplementary material to understand individually and as a group.

**HNI5 - 8: Trophy Hunting**

Species are going extinct at an increasing rate globally. Paradoxically, one mechanism proposed to conserve some species is to allow them to be hunted. Trophy hunting in particular may generate income that can support local people, and may be used to manage the target species, its habitat and ecosystem services, and the other species with which it cohabits. However, success relies of sound governance as it may precipitate illegal hunting, and it raises a suite of ethical questions. Alternative potential sources of livelihoods and mechanisms for generating financial support for species conservation will also be discussed as a counterpoint. The Trophy Hunting case study will begin by outlining the current state of extinction processes globally. It will explore the implications of trophy hunting and
the ways in which such proposals may be managed, as a way of developing ideas about how to reconcile competing social objectives in environmental management.

**HNI9 - 12: Getting to Net Zero**

To meet the climate goals of limiting global temperature rise to less than 1.5C it is becoming clear that we need to stop emitting carbon dioxide into the atmosphere sometime this century. The Net Zero goal, recently enshrined into UK law, commits the UK to reaching a net zero target by 2050. This will require a significant amount of effort, with every sector of industry and society having to contribute. The Net Zero case study will explore the background and some of the implications of this goal.

**HNI13 – 16: Vector Control**

Mosquitoes are the most important human disease vectors, responsible for the major causes of death throughout human history. Management may target vector abundance, their genetics, their habitats, the pathogen, or protect the human hosts from the vector or the pathogen, or various combinations of these. This case study will consider the objectives, options and perspectives that determine what management should be used, why and when.

**HNI17: Introduction to the end-of-term integrating essay**

*Dr Mike Tennant and Dr Bill Sheate*

This session provides essential guidance to the end-of-term timed integrating essay assessment.

**Interdisciplinary Case Studies**

While the Interdisciplinary Case Studies are not individually assessed, they are essential practice for the interdisciplinary essay that you will have to write in the final week of term. As with the SGS series you will be able to choose from a number of essay titles from a list posted on Blackboard and will then be allocated to one of your preferred titles on the basis of a ‘maximising happiness’ algorithm. Places will be limited for each essay topic. You will have **three days** to write the essay and submit it through the Blackboard Turnitin system.

An independent case study, where you write a group essay and have it marked by another group using the standard assessment scheme, will allow you to understand the expectations for the end-of-term essay.
Becoming an Independent Learner Module (BIL)
Co-ordinators: Dr Bill Sheate and Dr Ans Vercammen

At Master's level you are expected to develop as an independent learner, taking responsibility for your own education. You need to be able to understand and plan for your future and make decisions that will allow this to be realised. You need to be resilient in the face of any personal or professional set-backs.

This module provides you with personal, transferable, professional and analytical skills necessary to become an independent and life-long learner. It extends over the two taught terms and supports the independent research project at the beginning of the third term when it culminates in an assessment research proposal for your summer term research project. You can think of this as the 'long, thin module' because it runs through the year to support your learning, alongside the Core Course and the Option terms.

Learning outcomes

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

1. take responsibility for your own personal and professional learning and development (10, 11)
2. use appropriate problem-solving strategies and methodologies to tackle personal, team and professional problems (4).
3. independently identify and effectively scope a small-scale research project, based on a critical engagement with relevant literature (2, 11)
4. select and justify appropriate methodology with which to explore the research question (3, 4)
5. consider the ethical implications of the research and associated methodology and mitigate against negative consequences (8)
6. present your findings for assessment in written form (9).

This module covers the key skills needed to be an independent research-led problem-solver, including:

- analytical and problem-solving skills (e.g. quantitative and qualitative methods; decision tools)
- research methodology training
- professional skills (e.g. understanding group dynamics; peer assessment and feedback, presentation skills)
- personal resilience competences

The module, therefore, draws together a range of key transferable skills to support your learning during the Core Course and the MSc as a whole, and that will be of lasting value into your future careers, including: inductions; learning styles; assessment approaches and learning environments; bibliographic searching; time management; team working; critical thinking and analysis; relaxation and resilience, and even electoral methodologies.
BIL Module summaries

BIL00 First Week Inductions

All the online video welcomes and online inductions including to ICT and Health & Safety, and Introduction to the Core Course, are provided in Blackboard under the BIL module.

BIL Friday Problem Sessions

Once a week you will be able to participate in a facilitated problem session with a small group of other students. You will discuss questions that arise during the week’s lectures and apply and practice a range of critical thinking structuring tools and skills. These tools will include argument maps, force field analyses, critical reading skills and debates. The skills learnt through the sessions will help prepare you for your end-of-term integrating essay.

The sessions are intended to provide space for you to reflect on and discuss topics included in the core course and flag any gaps in understanding from the core course material. These can then be addressed by the lectures in the main online webinars.

BIL 1: Understanding team dynamics and introduction to problem sessions

Dr Mike Tennant / Dr Bill Sheate / Dr Maria Vinograd

Working in a team doesn't come naturally to everybody - some people are introverted or lack confidence and prefer to work alone, some people can be over-confident and bossy, and some people don't pull their weight, making team work less enjoyable for everybody. This session is a fun way to help you understand your own strengths and weaknesses for team working and how to deal with those of others. In advance of the session you should do the online Big 5 Personality Test (50 questions; it takes less than 5 minutes) at [https://psychcentral.com/personality-test/start.php](https://psychcentral.com/personality-test/start.php). We will explain how group working will be used during the Core Course and how peer assessment will also work. Both the Human World and Natural World modules are assessed through group projects, so you need to have a good appreciation of how to work effectively and efficiently in an interdisciplinary way and in groups made up of people from diverse backgrounds work.

BIL 2: Using Library resources

Katharine Thompson, Chemistry and Environment Librarian

In this session you will be introduced to our specialist staff; Katharine Thompson (Environment Librarian) and Daniel Whittaker (Senior Library Assistant) and the full range of library resources. Please ask them for advice when looking for information. Contact details for library staff can be found at [http://www.imperial.ac.uk/admin-services/library/subject-support/environment/](http://www.imperial.ac.uk/admin-services/library/subject-support/environment/)
You will be expected to sign-up for and attend two workshop training sessions over the first few weeks of term, which will include:

- recommended resources
- search tips and tricks
- better reading and note taking
- tools to save you time
- how to reference using Harvard
- avoiding the plagiarism trap!
- referencing made easy with RefWorks

**BIL 3: Peer Assessment: the how and why**

*Dr Louise Rickard*

This session builds on BIL 2 to explore in more detail how peer assessment of group work (PAG) works and how to undertake it. It provides you with detailed guidance of how to assess yourself and each other in your contributions to group working.

See the two introductory videos via Blackboard/Panopto before this session: There is a series of videos that include presentations and also interviews explaining PAG and students’ experience of PAG.

**Relaxation and Resilience Programme (R&R) BIL 4, 11 & 15**

*Bill Sheate (Imagination Therapy)*

CEP, uniquely at Imperial College, provides as an integral part of the MSc course this innovative programme of mindfulness, relaxation, stress management and resilience skills training, which runs throughout the academic year as the Relaxation and Resilience (R&R) Programme. It has been running now for five years and has proved very popular with the students (see feedback comments below).

**Part 1** consists of the first three sessions (R&R 1-3) delivered during the Core Course (BIL 4, BIL 11, and BIL 15) – see overview below; these are seen as core skills training for all students. Sessions in the Option and Summer terms (Parts 2 and 3: R&R 4-6), provide a progression of personal and social skills to include assertiveness and problem solving, helpful especially when working in option groups and in career planning.
Overview of R&R Programme

Feedback from students:

".....the R&R sessions were an incredible addition to the course."
"Relaxation and Resilience sessions [were] particularly helpful....."
"Super cool idea to do this and the students as a whole really enjoyed it!"
"R+R really helpful, not just for this term but for life!"
"I love the emphasis on mental health and management of stress. Thank you so much for including this in the MSc. I think it is a really enlightened approach."

Learning outcomes:

At the end of the R&R programme you will be able to:

- Use and apply key relaxation and mindfulness skills and so be more resilient to potentially stressful events, situations (LO 10, 11)
- Be more aware of their own thoughts, feelings and behaviours, and able to be a detached observer of them when necessary (LO 10, 11)
- Be more confident in themselves and assertive when they need to be (LO 4)
- Be better able to problem solve when faced with personal and professional situations they haven’t previously faced (LO 4)

This is a programme of sessions designed to introduce some simple self-help relaxation and stress management techniques and develop skills that you can benefit from directly in the session and then take away and repeat and tailor to your own needs in your own time (via audio recordings that will be provided via Blackboard). The programme is run by Bill Sheate who has many years’ experience
helping students suffering from stress and anxiety, and is delivered for CEP in his capacity as a qualified, registered cognitive behavioural hypnotherapist working in private practice (part-time)\(^1\), specialising in stress and anxiety in higher education. These sessions draw on mindfulness and relaxation practices, and core aspects of cognitive behavioural therapy. In addition, an **optional half-day Self-Hypnosis Workshop** is available for those who wish to explore this further (offered in the Spring Term). The three main sessions in the Core Course run in **Week 2, Week 4, and Week 7** and will be delivered this year as online Live Webinars (due to Covid-19).

Many of us from time to time will feel anxious and worry about all sorts of things – personal matters, assessments, finances, coping with work, did I make the right decision doing the MSc? We also experience stress exerted by work, by ourselves (in terms of our own expectations and the goals we set ourselves) or by the expectations (real or perceived) of others. We may feel we can't cope with things as well as we expect ourselves to be able to. Maybe we strive for perfection even though we know it isn't really achievable. Consequently, we can have lots of negative 'self-talk' – pop-up thoughts and stories we tell ourselves; worries that become self-reinforcing. Sometimes it can help to take time out and create a bit of space to do some focused relaxation or mindfulness (being in the present moment, accepting thoughts and feelings). By running these sessions as part of the BIL module, they are provided for everyone; they are seen as an important part of the MSc course as a whole because everyone can benefit from them. And all the more relevant given the current Coronavirus situation.

Audio recordings and further readings are provided on Blackboard, released immediately after the session:

**BIL 4: Introduction to Mindful Learning and Resilience (R&R 1)**

*Bill Sheate (Imagination Therapy)*

Skills training is very much about building long-term resilience and more than just managing stress. This first session introduces the concept of ‘mindful learning’, about enjoying the **process** of learning, rather than a focus on **outcomes**. It includes: a very brief introduction to the simple cognitive model (Ellis, 1967 ABC model) – the basis of cognitive behavioural therapy, and for understanding the relationship between thoughts, feelings and behaviour. This provides the basis for understanding how mindfulness and relaxation can be used to change the way we respond to events and stressors. It includes some simple mindfulness exercises, and exercises in imagination and relaxation.

**BIL 11: Relaxation and Resilience (R&R 2): Mindfulness**

*Bill Sheate (Imagination Therapy)*

An introduction to mindfulness, including cognitive awareness, acceptance, defusion and distancing (1.5 hours). A series of simple mindfulness-based exercises, followed by a longer mindfulness exercise. Mindfulness is one of the most helpful

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\(^1\) Dip CBH, GQHP, GHR Reg, CNHC Reg, Dip SMRB – [www.imaginationtherapy.co.uk](http://www.imaginationtherapy.co.uk) for more information.
techniques for dealing with anxiety and worry. It doesn’t have to involve lengthy meditation, as may be some people’s experience. It does involve integrating simple techniques into day-to-day living so you can be more in the present and less caught up in your thoughts.

**BIL 15: Relaxation and Resilience (R&R 3): Understanding stress, applied relaxation**

*Bill Sheate (Imagination Therapy)*

Relaxation and confidence building, including applied relaxation (belly breathing, tension releases breathing), understanding stress – what is it and how do we respond to stressors? Plus, a relaxation and confidence building exercise, with a focus on assessments and group working.

.................................

**BIL 5: Interpersonal Skills: Unconscious Bias and Active Bystander Training**

*Dr Caroline Howe*

This session has been introduced to support our commitment to Athena SWAN principles. It will introduce the concept of Unconscious Bias and how it can undermine College and Departmental goals. The session will teach you how to increase self-awareness and to manage possible biases in yourself and others, including around diversity and inter-cultural awareness. The second part of the session will introduce Active Bystander training which aims to empower individuals to challenge poor behaviours and bring about cultural change.

**BIL 6: Library workshops - Searching and Referencing**

*Katharine Thompson, Chemistry and Environment Librarian*

You will be given specific CEP training sessions and introduced to our specialist staff; Katharine Thompson (Environment Librarian) and Dan Whittaker (Senior Library Assistant). Please ask them for advice when looking for information. Contact details for library staff can be found at http://www.imperial.ac.uk/admin-services/library/subject-support/environment/

The training sessions will include:

- recommended resources
- search tips and tricks
- better reading and note taking
- tools to save you time
- how to reference using Harvard
- avoiding the plagiarism trap!
- referencing made easy with RefWorks
You will need to sign-up for these workshops via Blackboard; instructions will be given during the Library induction in the first week.

**BIL 7: Overview of quantitative skills and statistics (Part 1)**

*Dr Tilly Collins*

Science, business and policy, among other subjects, all use quantitative techniques to substantiate and evaluate evidence bases in many ways. At this level we all need a strong grasp of the underpinning principles of quantitative estimation and of the ways in which we can evaluate their use. This session acts as revision and consolidation for some, and as foundation material for others, to provide you with a base from which to consider and criticize the numbers and assertions that we meet in literature and news on a daily basis.

All MSc students should go through the **Quantitative skills for new students: Excel Refresher** exercise available on **Blackboard** (to be found in the BIL module) in the **FIRST week of term**, in order to check their current level of understanding of basic Excel functions and statistics.

**BIL 8: Overview Part 2: What does 'statistics' do?**

*Dr Tilly Collins*

The most common statistical tests that we met all serve to ‘partition the variance’ between what we can, and cannot, attribute to particular measured causes or drivers. Here we review the most common parametric tests that you are likely to encounter and consider the non-parametric equivalents and how these may differ in their conclusions. Understanding how to read, interpret and develop a critical eye for statistical misuse or misinterpretation will grow from these foundations.

*Readings:*

https://www.sciencenews.org/article/statisticians-standard-measure-significance-p-values


https://www.nature.com/news/statisticians-issue-warning-over-misuse-of-p-values-1.19503

**BIL 9: Critical thinking and problem framing for sustainability**

*Dr Mike Tennant*

**What is critical thinking?**

When we are faced with claims about particular things, for example the use of nuclear energy, genetically-modified crops or the causes of poverty, it is important to scrutinise those claims and decide upon their validity rather than take them at face value and potentially make a mistake in basing future thoughts and actions on what could be erroneous knowledge. At its most basic level critical thinking requires that
we question every stage of a knowledge claim, including the formulation of the question (“am I asking the right questions?”), the methods and evidence used (“is this a good way to investigate the question?”) and the conclusions that are developed (“given the information I have, do these conclusions reflect the evidence faithfully?”). Critical thinking not only concerns evidence, but also challenges bias and ideology, for example the contemporary move to commodify nature can be seen to benefit those with financial power rather than nature itself; our own particular upbringing can lead us to think in particular ways about things. We can ask questions that try to tease these biases out: who does this position benefit? if I were to believe what others believe, would I see things in a different way?

Finally, critical thinking involves evaluation of alternatives and the development of a course of action. While this may be straightforward if there is an over-whelming weight of evidence in favour of a particular situation, it may not to be in complex situations where political or ethical questions are considered. Creativity, imagination and inclusive decision-making are important tools that need to be employed at this stage.

**BIL 10: The contrasting roles of science and technology in environmental challenges**

*Professor Nick Voulvoulis*

Public distrust lies at the heart of the serious crisis of sustainability that humanity is failing to address, insofar as distrust of environmental scientists, communicators, and policymakers are all undermining public demand for better public policies. Social inertia and denial have been allegedly amplified by a public discourse increasingly distrustful of science. But is this discourse a rejection of science or an erosion of trust in how science is applied?

The session examines the main differences between environmental science and technology, reviews how the wider science-technology convergence has affected them and evaluates potential implications for sustainability challenges. Could the “convergence” between environmental science and environmental technology, between the process of generating knowledge and that of applying it to deliver change, be behind the growing public dissatisfaction and distrust of environmental science and policies, and what should be the roles of science, technology and society in surviving existential environmental challenges?


**BIL 12: Video and poster presentations**

This is a set of online resources to provide practical guidance on producing video and poster presentations for your assessments.
BIL 13: Self-awareness and learning style (Core Course: What's it all about?)

*Dr Bill Sheate, Dr Caroline Howe, Dr Mike Tennant*

An interactive discussion session to set the Core Course in context. Where has the Core Course got to so far? Identifying links and synergies across the modules, integrating disciplines and subjects. What do we mean by interdisciplinarity? Generic issues to do with the Core Course, its structure and delivery. Developing your own approach to learning. Prioritising and allocating your time effectively. Working in groups.

BIL 14: Exploring Eco-anxiety

*Dr Ans Vercammen, Dr Bill Sheate, Ute Thiermann*

This session explores the rising issue of eco-anxiety. As we present you as part of the MSc course with more and more information on environmental impact and sustainability challenges, it is important to also recognise how we as individuals can respond to this knowledge. For some it provokes a range of different emotions e.g. anxiety, sadness and behavioural responses. We explore the research in this area and helpful techniques for managing eco-anxiety, with an opportunity for wider discussion and sharing of experience.

BIL 16: Strategies for collecting and using qualitative data

*Dr Caroline Howe*

This session will introduce types of qualitative data that you may encounter during the Core Course and Option Terms, and that you may want to consider collecting during the Thesis term. We will explore why we need to consider the social sciences in environmental sustainability research and conflicts that arise between the natural and social sciences. We will look at values for nature and behavioural change as well as exploring different methods for both collecting and analysing qualitative data and how to present findings from qualitative research to policy makers.

*Pre-reading*


Spring Term - Overview (January – March 2021)
(details to be provided in Option handbooks, to include BIL 17-32:)

Oral presentation skills
Project management
Innovation and creativity
Relaxation and Resilience (R&R 4): Assertiveness skills
Environmental Careers Seminar
Mentor programme launch (evening)
Relaxation and Resilience (R&R 5): Problem solving skills
Career Changers and Internships Seminar
Research Strategy; Research Design (MT)
Project Risk Assessment (H&S, Stef Hoyle)
Project term - Introduction to thesis and research proposal (RG)
Optional Self-Hypnosis (half-day) Workshop
Negotiation skills, and leadership
Interdisciplinarity: Challenges and opportunities
Meta-science
Research ethics

Part 3: Summer term (during project research methods fortnight)

Further research methods, especially social science methods, will be provided in the first two weeks of the project term (timetable to be provided nearer the time). These two weeks of training are compulsory for all students; you are not allowed to start on your research project or leave for field work until you have completed the required training and submission of the full thesis proposal.
Structuring Arguments and Critical Thinking

Throughout the MSc you will need to develop strong and logically-coherent arguments. These arguments normally consist of a particular claim supported by reasons for why you believe your claim to be true or false. When you look for reasons you will likely find that some will support your claim while others contradict it. In these cases, you will need to evaluate the relative strength of these different reasons so that you are able to come to well-informed conclusions.

This process is the basis of critical thinking and is an important skill to learn when exploring sustainability and making recommendations for action. It goes beyond descriptions of a problem and recognises that for complex problems such as sustainability there are many different reasons and sources of evidence that we can and need to take into account. These can contradict each other, and vary in strength and quality. You need to analyse problems, evaluate and synthesise relevant evidence before developing conclusions.

The Problem Sessions schedule for Friday afternoons will help you develop your critical thinking skills and introduce you to some tools that will be useful for making sense of interdisciplinary problems.
### 3. Timetable (first week)

#### Celcat_2021

**Group timetable - LF CORE (Wk 1, wk starting 05/10/2020)**

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The rest of your timetable is available via the online calendar, using the Imperial College app. Any changes to the timetable will be made there, so this will always be the most up-to-date information. The full timetable is also available in pdf format in the BIL module of Blackboard

https://bb.imperial.ac.uk/webapps/blackboard/content/listContentEditable.jsp?content_id=1926334_1&course_id=21225_1

Most Core Course sessions this year 2020-21 (because of Covid-19) will be online (recorded and live) apart from small group teaching which will be mixed-mode or in-person where possible (given prevailing constraints/guidance). The Sherfield Suite is a series of meeting rooms that will be used for in-person small group work. We may use some rooms also in CEP’s Weeks Building

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**NOT available during Autumn Term due to Covid-19 restrictions.**
Welcome to Imperial app

The College has a Welcome to Imperial app which contains important information about campus operations, aspects of student life, a schedule of welcome activities and information about life in halls. All new students should download this guide to ensure they have the most up to date information and event schedule for the start of term.

You can download the App from the Apple or Google App Stores.

Imperial Success Guide

The Imperial Success Guide is an online resource with advice and tips on the transition to Master’s level study. More than just a study guide, it is packed with advice created especially for Imperial Master’s students, including information on support, health and well-being and ideas to help you make the most of London.

www.imperial.ac.uk/success-guide
4. Assessment

How your core course work is assessed

Throughout the MSc you will be doing a variety of work and it will be assessed in different ways. During the Core Course you will work on two individual essays and three pieces of group work and you will have to demonstrate a critical engagement with your subject; this means that to pass (50%) you will need to show that you can analyse, synthesise and evaluate information, normally for each piece of work.

If you do not achieve a pass mark (50%) overall in these core course components you will not be required to resubmit your work and will not be able to resubmit for a higher mark. However, the assessment for the Human/Natural Interface module has to be passed, regardless of your marks in the other two modules.

To achieve a Distinction for the MSc in Environmental Technology you will need to achieve at least 70% overall and at least 70% in your research project. Full details can be found in the Programme Specification online.

Descriptions of the assessed work are given below, and more detailed information can be found in the respective module sections. The overall relationship is shown here:

**Individual essays: Human/Natural Interface module**

For the Human/Natural Interface module you will individually write two essays. Your **Small Group Seminar (SGS) essay** will account for 10% of your term marks and an end-of-term integrating essay will account for 35% of your term marks.

The Human/Natural Interface module is a “core” module and you have to pass it. If you achieve less than 50%, averaged across the two essays, you will be required to resubmit one or both of them. The marks for any resubmitted essays in this module will be capped at 50%.
Group work: Natural World and Human World modules

For the **Natural World** module you will work in a group and develop a concept map for a particular ecological management question (25%) and derive policy recommendations from that (10%).

For the **Human World** module you will work in a group to develop a set of policy, economics and regulatory recommendations based on your SGS essays. You will present this as a video presentation (10%) and a poster (10%).

**Peer assessment**

Being able to work effectively in a team is a skill that is highly sought after by employers. You will have the opportunity to develop these skills throughout the year.

Effective team work is assessed in groups along with the traditional assessment of group outputs. For each piece of group work you will receive a mark for the output (e.g. a group report or poster) from an academic member of staff and a peer mark from your team mates. The peer score reflects how well the members of your teams thought you contributed to the group process and results in an individual score that can be higher or lower than the group mark. For example, if your team mates decided that you worked exceptionally well your individual mark could be higher than the group mark; conversely, if you contribute nothing at all to the group work you could end up with an individual mark of zero for the entire assessment.

You will receive training in group working and peer assessment, but it is your responsibility to make the appropriate effort to work effectively with your team mates.

- All group members will be required to assess all members of their team.
- You will be required to grade team members against a set of criteria that we provide. Training will be given on how to interpret and apply these criteria.
- You will be required to give a written justification for why you gave your grades. This will be transparent – the person you grade will see the grade, the justification and know that it came from you. This means that you are accountable for your actions and have to take a mature and thoughtful approach to working with team mates.
- You will have a right to appeal if you feel that you are being treated unjustly by your fellow team members.
Instruction to Candidates for Examinations

Students who are candidates for examinations are asked to note that all examinations are conducted in accordance with the College Regulations. The relevant set of regulations will depend on your programme and year of entry, please see our Regulations webpage to determine which apply to you:

- [www.imperial.ac.uk/about/governance/academic-governance/regulations/](http://www.imperial.ac.uk/about/governance/academic-governance/regulations/)

Instructions for exam candidates can be found here:


Academic Integrity and Academic Misconduct

As your programme of study continues, you will be taught the concept of academic integrity and how you can ensure that any work that you complete now, or in the future, conforms to these principles. This means that your work acknowledges the ideas and results of others, that it is conducted in an ethical way and that it is free from plagiarism.

Academic misconduct is the attempt to gain an academic advantage, whether intentionally or unintentionally, in any piece of assessment submitted to the College. This includes plagiarism, self-plagiarism, collusion, exam offences (cheating) or dishonest practice. Full details of the policy can be found at:


Definitions of the main forms of academic misconduct can be found below:

**Plagiarism**

Plagiarism is the presentation of another person’s thoughts, words, images or diagrams as though they were your own. Another form of plagiarism is self-plagiarism, which involves using your own prior work without acknowledging its reuse. Plagiarism may be intentional, by deliberately trying to use another person’s work by disguising it or not citing the source, or unintentional where citation and/or referencing is incorrect.

Plagiarism must be avoided, with particular care on coursework, essays, reports and projects written in your own time but also in open and closed book written examinations. You can support your understanding of proper referencing and citation by using the resources available from the College such as the Library learning support webpages at:

- [www.imperial.ac.uk/admin-services/library/learning-support/plagiarism-awareness/](http://www.imperial.ac.uk/admin-services/library/learning-support/plagiarism-awareness/)

Where plagiarism is detected in group work, members of that group may be deemed to have collective responsibility for the integrity of work submitted by that group and may be liable for any penalty imposed, proportionate to their contribution.

TurnitinUK is an online text matching service which assists staff in detecting possible plagiarism. The system enables institutions and staff to compare students' work with a vast database of electronic sources. Your programme team will explain how it is used in your programme

- [www.imperial.ac.uk/admin-services/ict/self-service/teaching-learning/turnitin/](http://www.imperial.ac.uk/admin-services/ict/self-service/teaching-learning/turnitin/)
Collusion
This is the term used for work that has been conducted by more than one individual, in contravention of the assessment brief. Where it is alleged that there has been collusion, all parties will be investigated under the Academic Misconduct procedure.

You should note that whilst the College encourages students to support each other in their studies you should be careful to ensure that you do not exceed any assessment brief with regards to individual work, acknowledge the contributions of others in your work, and do not leave yourself open to allegations that you have supplied answers to enable another student to commit academic misconduct.

Exam offences
Exam offences fall into two categories. These are offences that may be disruptive in the exam venue or are considered an attempt to cheat. This can include behaviour such as bringing unauthorised material into an exam, attempting to communicate with others apart from the invigilator, trying to remove examination material without permission, taking an exam for someone else or getting someone else to take an exam for you. It would also include having an electronic device that has not been fully turned off or failing to follow a reasonable instruction of the invigilators.

Dishonest practice
This is the most serious category under the procedure. Examples of dishonest practice include bribery, contact cheating (buying work from an essay mill or other individual to submit as your own), attempting to access exam papers before the exam, making a false claim for mitigating circumstances or providing fraudulent evidence, falsifying documentation or signatures in relation to assessment or a claim for mitigating circumstances.
### 5. Board of Examiners

#### Board of Examiners

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<tr>
<td>Chair of BoE</td>
<td>Dr Mike Tennant</td>
<td>MSc Environmental Technology Course Director</td>
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<tr>
<td>Core Course</td>
<td>Dr Bill Sheate</td>
<td>Deputy Director MSc, Director of Careers</td>
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<td>Dr Caroline Howe</td>
<td>Co-Directors CC,</td>
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<tr>
<td>Integrated Water Management</td>
<td>Claire Hunt</td>
<td>Convenor</td>
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<tr>
<td>Urban Sustainable Environments</td>
<td>Dr Audrey de Nazale</td>
<td>Convenor</td>
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<tr>
<td>Global Environmental Change and Policy</td>
<td>Zen Makuch/Mrs Karen Makuch</td>
<td>Convenor</td>
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<tr>
<td>Environmental Resource Management</td>
<td>Dr Alex Collins/Dr Caroline Howe/ Dr Vinogradova</td>
<td>Convenor</td>
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<tr>
<td>Environmental Economics and Policy</td>
<td>Dr Clive Potter/Dr Yiannis Kountouris</td>
<td>Convenor</td>
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<tr>
<td>Environmental Assessment and Management</td>
<td>Dr Martin Head</td>
<td>Convenor</td>
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<tr>
<td>Energy Policy</td>
<td>Dr Iain Staffell/Dr Paul Balcombe</td>
<td>Convenor</td>
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<tr>
<td>Business and the Environment</td>
<td>Dr Mike Tennant/Dr Louise Rickard</td>
<td>Convenor</td>
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<td>Dr Tilly Collins</td>
<td>Women’s Tutor</td>
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#### External Examiners

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<tr>
<th>Core Course</th>
<th>Dr Joe Bull</th>
<th>University of Kent</th>
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<tr>
<td>Integrated Water Management</td>
<td>Mark Gaterell</td>
<td>University of Portsmouth</td>
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<tr>
<td>Urban Sustainable Environments</td>
<td>Jo Guy</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>Global Environmental Change and Policy</td>
<td>Prof Duncan French</td>
<td>University of Lincoln</td>
</tr>
<tr>
<td>Environmental Resource Management</td>
<td>Felix Eigenbrod</td>
<td>University of Southampton</td>
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<tr>
<td>Environmental Economics and Policy</td>
<td>Laura Costanzo</td>
<td>University of Southampton</td>
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<tr>
<td>Environmental Assessment and Management</td>
<td>Andrew Sweetman</td>
<td>University of Lancaster</td>
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<tr>
<td>Energy Policy</td>
<td>Jonathan Radcliffe</td>
<td>University of Birmingham</td>
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<tr>
<td>Business and the Environment</td>
<td>Alan Murray</td>
<td>University of Edinburgh</td>
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External examining acts as an essential part of the College’s quality assurance and enhancement process, serving to ensure that academic standards are maintained. The knowledgeable and independent views of external examiners are invaluable in certifying that the College’s awards are appropriate and comparable as well as highlighting good practice and potential areas of enhancement.
During your programme you may be invited to meet your external examiners to discuss how you have found the programme or for a type of assessment called a viva voce (verbal exam). It is not appropriate however, for you to seek to submit complaints or representations directly to external examiners or to seek to influence them other than by giving feedback in a meeting. Inappropriate communication towards an examiner would make you liable for disciplinary action.

A summary of External examiners reports from the previous academic year can be found here:  

www.imperial.ac.uk/about/governance/academic-governance/academic-policy/external-examining/
6. Location and Facilities

Imperial has a number of campuses in London and the South East. All have excellent travel links and are easily accessible via public transport.

Your main location of study will be:

**Your main location(s) of study will be:** Weeks Building, 16-18 Prince's Gardens, Imperial College London, South Kensington London SW7 1NE
Tel: +44 (0)20 7594 9285 / +44 (0)20 7597759

Location and orientation of the department

Weeks Building Prince’s Gardens – numbers 16-18 provide the focal point of the MSc in Environmental Technology. Located on the opposite side of Exhibition Road to the main campus, but close to the Ethos Sports Centre on the north side of Prince’s Gardens. There is a shop and Eastside Bar/cafe opposite the buildings in Prince’s Gardens.

Library Services

The Central Library at South Kensington is open around the clock for study space pretty much all year. Make sure you find out who your departmental librarian is as they’ll be able to help you find resources for your subject area. Also, don’t forget to check out the Library’s range of training workshops and our other campus libraries for access to specialist medicine and life sciences resources. Alongside these physical spaces and resources, the Library provides over 300,000 electronic books, journals and databases available both on and off campus and a free document delivery service to help you source books and articles from around the UK and the rest of the world. In order to keep you safe many of our services are operating remotely and we will be controlling the numbers who can visit our libraries. Services may be slightly reduced but you can keep up to date with the latest developments on our website and on Twitter @imperiallibrary.

[www.imperial.ac.uk/library](http://www.imperial.ac.uk/library)

Shuttle bus

A free shuttle bus runs between our South Kensington, White City and Hammersmith Campuses on weekdays. Seats are available on a first-come, first-served basis. You need to show your College ID card to board. You can download the timetable and check the latest service updates at:

[www.imperial.ac.uk/estates-facilities/travel/shuttle-bus](http://www.imperial.ac.uk/estates-facilities/travel/shuttle-bus)

Maps

Campus maps and travel directions are available at:

[www.imperial.ac.uk/visit/campuses](http://www.imperial.ac.uk/visit/campuses)
Accessibility

Information about the accessibility of our South Kensington Campus is available online through the AccessAble access guides:

_website: www.accessable.co.uk/organisations/imperial-college-london_

Smoke-Free Policy

All Imperial campuses and properties are smoke-free. This means that smoking by staff, students or visitors is not permitted on or within 20 metres of College land. The policy covers all College properties, including student accommodation and sports grounds.

_website: www.imperial.ac.uk/smoke-free_

SafeZone

SafeZone is a College app through which you can quickly and directly contact the Security team whenever you need them. Whether you're in an emergency situation, in need of First Aid or want to report an incident on campus, SafeZone allows you to be immediately put in touch with a member of our Security team and, at the touch of a button, can share your location and personal profile so that they can respond quickly and effectively to your specific needs. It also allows the entire College community to stay informed in the event of a major incident in London or wherever you may be in the world. Safezone also provides information on other services, such as real-time updates on the College shuttle bus.

SafeZone is optional to register for and is now available to download on the Apple and Android App stores. Visit _www.imperial.ac.uk/campus-security_ for more details about SafeZone.

All existing phone numbers for the Security team are still operational. In the event of an emergency, you can still call 4444 from any internal College phone. In the event of a wider incident in London, you can now also call 0300 131 4444, Imperial's Emergency Recorded Message Line, which will point you in the direction of up-to-date information and advice.

Changes due to Coronavirus (COVID-19)

The College will keep you informed about any further changes that may affect you due to the impact of coronavirus (COVID-19). The COVID-19 FAQs on the website are a repository of helpful information and the latest guidance can be found at:

_website: www.imperial.ac.uk/about/covid-19/students_
7. Placements

The College defines a placement as:

"work experience, assessed project work, a period of course-based study or a period of research (for which academic credit is awarded and/or where the student remains subject to College student regulations during the relevant period) and where there is a transfer of direct supervision of the student to a third party (i.e. where a member of staff at the third party acts as the day-to-day supervisor/manager) for a period of two weeks or more."

Academic departments are responsible for managing any study or work placement which forms part of your degree programme. It is expected that you will contribute to the process of planning your placement.

For guidance on this, see the College’s Placement and Learning Policy and associated good practice:

- www.imperial.ac.uk/about/governance/academic-governance/academic-policy/placement-learning

**IMPORTANT** - The Department has strict rules on placements and internships during the academic year – most full-time internships during the summer term, for example, are unlikely to be compatible with completing a satisfactory thesis and therefore will not be permitted. You must seek advice and approval from your supervisor/Option convenor/Director with regard to any internship/placement opportunity. Further details are provided in the Project Guidelines issued during the Option term.

Placements/internships during the Autumn and Spring terms are not allowed. The MSc in Environmental Technology is a full-time course and it is expected that you prioritise your academic work over any external work.

The Careers Service provides support on placements and internships, but within our own Departmental guidelines.

Dr Samira El Boudamoussi is the Director of Summer Term Projects and should be consulted in case of any queries.

The Careers Service is available to provide students with additional support in sourcing placement opportunities and preparing to apply for placement opportunities:

http://www.imperial.ac.uk/careers/opportunities/internships/

The Careers Service is available to provide students with additional support in sourcing placement opportunities and preparing to apply for placement opportunities:

- www.imperial.ac.uk/careers/opportunities/internships/

For general information on undertaking a placement visit the Placements website:
- www.imperial.ac.uk/placements

If you are considering/planning a placement outside the UK, you should also refer to the Placement Abroad Handbook:

- www.imperial.ac.uk/placements/information-for-imperial-college-students
8. Working While Studying

If you are studying full time, the College recommends that you do not work part-time during term time. If this is unavoidable we advise you to work no more than 10–15 hours per week, which should be principally at weekends and not within normal College working hours.

Working in excess of these hours could impact adversely on your studies or health.

If you are here on a Tier 4/Student Route visa you can work no more than 20 hours a week during term time. Some sponsors may not permit you to take up work outside your studies and others may specify a limit.

If you are considering part-time work during term time you are strongly advised to discuss this issue with your supervisor or Personal/Senior Personal Postgraduate Tutor. If you are on a Tier 4/Student Route visa you should also seek advice from the International Student Support team regarding visa limitations on employment.

The College’s examination boards will not normally consider as mitigating circumstances any negative impact that part-time work during term-time may have had on your performance in examinations or in other assessed work. Examinations or vivas cannot be rescheduled to accommodate your part-time working arrangements.
9. Health and Safety

Keeping you safe is a top priority for us. We continue to be guided by the latest official government guidance. At Imperial, we also have some of the world’s leading researchers of the coronavirus (COVID-19) pandemic who are advising governments around the world on the most effective measures to take to protect people from the virus as well as developing and testing a new vaccine.

Government guidance will continue to change in the UK over the coming months and we are regularly updating our plans for your safe return to campus.

You can find the latest guidance on the measures we are taking for your safety, plus information about the healthcare support available to you at:

www.imperial.ac.uk/about/covid-19/students/keeping-you-safe/

What measures to expect in the Autumn Term?
Arrangements may change, but on current plans, as a minimum you can expect:

Welcome pack
On arrival at Imperial, you will receive a welcome pack that will include three washable cotton face coverings, hand sanitiser and anti-viral wipes.

Good infection control
The College is implementing good infection control procedures, for example, by frequently cleaning and disinfecting objects and surfaces that are touched regularly including door handles, light switches, furniture, handrails, IT equipment, desks, phones, flush plates, taps and dispensers. Perspex screens will also be used across the College in reception and service areas.

Hand sanitisers and multi-surface cleaning wipes
Around the College there will be hand sanitisers and multi-surface cleaning wipes for you to use, as well as plenty of hand-washing facilities.

Social distancing
You should keep at least two metres apart from other people. If you need to be in closer proximity, you should still stay more than one metre apart and it will be essential you adopt additional mitigating measures, such as wearing a face covering or a face visor, depending on where you are within campus. There will be clear signage systems and protocols to ensure you can go about your business while maintaining social distancing and good hygiene.

Face coverings
On campus, wearing a face covering is essential in most locations. Face coverings should cover both your mouth and nose.

When it’s essential to wear a face covering:
- Walking around campus
- Cafes and welfare spaces
- Lecture theatres
- Teaching rooms
- Library (in queues)
- Halls of residence
- Travelling on public transport

When it’s not essential to wear a face covering:
- Library (when studying)
- Offices
- Laboratories
- Workshops

For laboratories and other high-risk areas please refer to the local risk assessments for exact requirements.
You are responsible for looking after your own health and safety and that of others affected by your College-related work and leisure activities. You must:

- comply with all local and College policies, procedures and codes of practice and with the arrangements which the College has in place to control health and safety risks.
- ensure that your activities do not present unnecessary or uncontrolled risks to yourself or to others.
- attend appropriate induction and training.
- report any accidents, unsafe circumstances or work-related ill health of which you become aware to the appropriate person.
- not interfere with any equipment provided for Health and Safety.
- inform your supervisor or the person in charge of the activity in cases where you are not confident that you are competent to carry out a work or leisure activity safely, rather than compromise your own safety or the safety of others.

The College’s Health and Safety Policy can be found at:


Your Departmental safety contact(s) is/are: Anca Gourlay

- Weeks Building GO1A
- +44 20 7594 9303
- a.gourlay@imperial.ac.uk

The College Safety Department

The Safety Department offers a range of specialist advice on all aspects of safety. This includes anything which you feel might affect you directly, or which may be associated with teaching, research or support service activities.

The College’s activities range from the use of hazardous materials (biological, chemical and radiological substances) to field work, heavy or awkward lifting, driving, and working alone or late.

All College activities are covered by general health and safety regulations, but higher risk activities will have additional requirements.

The Safety Department helps departments and individuals ensure effective safety management systems are in place throughout the College to comply with specific legal requirements.

Sometimes the management systems fail, and an accident or a near-miss incident arises; it is important that we learn lessons from such situations to prevent recurrence and the Safety Department can support such investigations. All accidents and incidents should be reported online at:

www.imperial.ac.uk/safety
To report concerns or to ask for advice you should contact your programme director, academic supervisor or departmental safety officer in the first instance. You may also contact the Safety Department directly.

Department’s Safety Officer: Anca Gourlay a.gourlay@imperial.ac.uk

**Occupational Health requirements**

The College Occupational Health Service provides services to:

- protect health at work
- assess and advise on fitness for work
- ensure that health issues are effectively managed

The Service promotes and supports a culture where the physical and psychological health of staff, students and others involved in the College is respected, protected and improved whilst at work.

[www.imperial.ac.uk/occupational-health](http://www.imperial.ac.uk/occupational-health)
10. College Policies and Procedures

Regulations for Students
All registered students of the College are subject to the College Regulations. The relevant set of regulations will depend on your programme and year of entry, please see our Regulations webpage to determine which apply to you:

- www.imperial.ac.uk/about/governance/academic-governance/regulations
- www.imperial.ac.uk/students/terms-and-conditions

Academic Feedback Policy
We are committed in providing you with timely and appropriate feedback on your academic progress and achievement, enabling you to reflect on your academic progress. During your study you will receive different methods of feedback according to assessment type, discipline, level of study and your individual need. Further guidance on the Policy of Academic Feedback can be found on the Academic Governance website:

- www.imperial.ac.uk/media/imperial-college/administration-and-support-services/registry/academic-governance/public/academic-policy/academic-feedback/Academic-feedback-policy-for-taught-programmes.pdf

Feedback on the MSc Environmental Technology follows the College policy on feedback, assessment being a mixture of formative and summative (see Course Specification) and Core Course, Option and Thesis handbooks/guidelines. All marks are returned to students online as provisional marks until confirmation by the final Board of Examiners at the end of the academic year.

Please note that your examination scripts once completed are belong to the College under the GDPR legislation. This means that you do not have the right to view them. Please see the College GDPR webpages for further information at:


Provisional Marks Guidance
Provisional marks are agreed marks that have yet to be ratified by the Board of Examiners. These results are provisional and are subject to change by the Board of Examiners. The release of provisional marks is permitted except in certain circumstances. Further information can be found in the Guidelines for Issuing Provisional Marks to Students on Taught Programmes:


Late Submission Policy
You are responsible for ensuring that you submit your coursework assessments in the correct format and by the published deadline (date and time). Any piece of assessed work which is submitted beyond the published deadline (date and time) would be classed as a late submission and will incur a penalty (a cap at the pass mark, or it is classed as a fail). Further
guidance on Late Submission of Assessments can be found on the Academic Governance website:

- [www.imperial.ac.uk/media/imperial-college/administration-and-support-services/registry/academic-governance/public/academic-policy/marking-and-moderation/Late-submission-Policy.pdf](http://www.imperial.ac.uk/media/imperial-college/administration-and-support-services/registry/academic-governance/public/academic-policy/marking-and-moderation/Late-submission-Policy.pdf)

If you submit late due to mitigating circumstances, you may be able to make a claim that means that the cap on your mark is lifted. Please see below and the policy document.

**Mitigating Circumstances**

During your studies you may be affected by sudden or unforeseen circumstances. You should always contact your personal tutor for advice and support. If this happens at the time of, or immediately preceding your assessments you may be able to make a claim for mitigating circumstances. If successful this claim enables the Board of Examiners when reviewing your marks at the end of the year to have greater discretion with regards to offering repeat attempts (either capped or uncapped), a repeat year, or with your progression or final classification. Please note, the Board are not permitted to amend the marks that you were awarded, only to take your claim into account making decisions.

All claims must be supported by independent evidence and submitted within 10 working days of the assessment deadline. Any claim made after this deadline is likely to be rejected unless there is a good reason (such as you were still unwell) until the point of submitting the claim. Details of the College’s Mitigating Circumstances procedure can be found under the Mitigating Circumstances tab on the page below:

- [www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/](http://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/)

Through the procedure you may also be able to request an extension to deadline to some forms of assessment. Wherever possible it is expected that this is used as it will enable to you complete your studies within the same College year (rather than over the summer holiday or in the next year).

Your department will have specific instructions for making a claim for mitigation or for requesting an extension - see Core Course details above and on Blackboard. Details can be found at [https://bb.imperial.ac.uk/webapps/blackboard/content/listContentEditable.jsp?content_id=_1926334_1&course_id=_21225_1](https://bb.imperial.ac.uk/webapps/blackboard/content/listContentEditable.jsp?content_id=_1926334_1&course_id=_21225_1).

Support for ongoing or long-term conditions, or for registered disabilities would not normally fall under the remit of mitigating circumstances and students should be supported through their studies with Additional Examination Arrangements. More details can be found at:

- [www.imperial.ac.uk/disability-advisory-service/support/exams/](http://www.imperial.ac.uk/disability-advisory-service/support/exams/)

**Academic Misconduct Policy and Procedures**

As has been highlighted under the Academic Integrity section, it is important that you learn how to properly attribute and acknowledge the work, data and ideas of others. Any proven form of academic misconduct is subject to penalties as outlined in the College’s Misconduct Policy and Procedures.

- [www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/](http://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/)
**Unsatisfactory Progress**

Unfortunately sometimes students struggle to make satisfactory progress in their study or their engagement with their studies falls below our expectations. The College has a process to identify and support students by reaffirming these expectations with an action plan. The full details of this process, and the appeals procedure relating to it can be found at:

www.imperial.ac.uk/about/governance/academic-governance/academic-policy/complaints-appeals-and-discipline

www.imperial.ac.uk/admin-services/secretariat/college-governance/charters/policies-regulations-and-codes-of-practice/fitness-to-practise/

**Academic Appeals Procedure**

We have rigorous regulations in place to ensure assessments are conducted with fairness and consistency, claims for mitigating circumstances have been considered reasonably and in line with the regulations of the College, and that the decisions of the Boards of Examiners maintain the integrity of our academic awards. In the event that you believe that you have grounds to appeal these decisions, we have laid out clear and consistent procedures through which appeals can be investigated and considered:

www.imperial.ac.uk/about/governance/academic-governance/academic-policy/complaints-appeals-and-discipline

**Arithmetic Marks Check**

If you consider that there may have been an error in the adding up of your marks, you may request an arithmetic mark check. Please note that this must be requested within 10 working days of the official notification of your results from the Results team in Registry. You may not request a marks check for a previous year of study.

**Student Complaints**

The College strives to ensure that all students are well supported in their studies and receive a good experience of their programme and the wider College activities. If you feel that your experience has not lived up to these expectations the College has an agreed Students Complaints process through which your concern can be investigated and considered.

If you have any concerns about your experience at the College and have been unable to address these informally, you should contact Student Complaints who can provide advice about what is the appropriate way to seek to resolve this at:

student.complaints@imperial.ac.uk

www.imperial.ac.uk/about/governance/academic-governance/academic-policy/complaints-appeals-and-discipline

**Student Disciplinary Procedure**

The College has the right to investigate any allegation of misconduct against a student and may take disciplinary action where it decides, on the balance of probabilities, that a breach of discipline has been committed. The general principles of the Student Disciplinary Procedure are available on the College website:

www.imperial.ac.uk/admin-services/secretariat/college-governance/charters/ordinances/students/
**Intellectual Property Rights Policy**
For further guidance on the College’s Intellectual Property Rights Policy is available on the College website:

- www.imperial.ac.uk/research-and-innovation/research-office/ip/ip-policy/

Further information about the Imperial Enterprise Lab can be found at:

- www.imperial.ac.uk/students/enterprising-students
- www.imperialenterpriselab.com/support/experts-in-residence

**Use of IT Facilities**
View the Conditions of Use of IT Facilities:

- www.imperial.ac.uk/admin-services/ict/self-service/computers-printing/staff-computers/conditions-of-use-for-it-facilities/

**General Data Protection Regulation (GDPR)**
All staff and students who work with personal data are responsible for complying with GDPR. The College will provide support and guidance but you do have a personal responsibility to comply.

In line with the above please see the College’s privacy notice for students which form part of the terms and conditions of registration with the College.

11. Wellbeing, Support and Advice

In your department
Your department has a system of academic and pastoral care in place to make sure you have access to the appropriate support throughout your time at Imperial.

Your Personal Tutor
Your Personal Tutor is your first point of contact for pastoral support and advice. You can arrange to have a meeting with them at any time during your studies (although most Personal Tutors will have set office hours or may require you to make an appointment).

If necessary, they will direct you to an appropriate source of support.

If in doubt, contact the CEP Senior Tutors: Yiannis Kountouris or Tilly Collins (Women’s Tutor)

Departmental Disability Officers
Departmental Disability Officers are the first point of contact in your department for issues around disability. They can apply for additional exam arrangements on your behalf and will facilitate support within your department.

Your Departmental Disability Officer is: Yiannis Kountouris
Email: i.kountouris@imperial.ac.uk
Telephone: 0207 594 9316

More information on Departmental Disability Officers is available at:

www.imperial.ac.uk/disability-advisory-service/support/ddos

More information about how to request additional arrangements for exams if you have a disability is available at:


Your Union
All Imperial students automatically become members of Imperial College Union when they register at the College. The Union provides a range of independent support.

Imperial College Union Advice Centre
The Union’s advisers are on hand to provide free, confidential, independent advice on a wide range of welfare issues including housing, money and debt, employment and consumer rights, and personal safety.

www.imperialcollegeunion.org/advice
**Student representatives**

Imperial College Union operates two Representation Networks of over 600 elected student representatives – the Academic Representation Network and the Wellbeing Representation Network. Reps represent the voice of students and can direct you to internal and external support services. The Union’s Liberation Officers also work to make sure that the views of under-represented and interest groups are heard at the College.

If you have any feedback about issues in your department relating to academic or wellbeing issues, you can speak to one of your student representatives (see Core Course details above).

- [www.imperialcollegeunion.org/your-union/your-representatives/a-to-z](http://www.imperialcollegeunion.org/your-union/your-representatives/a-to-z)

**Student Hub**

At the Student Hub, you can access advice about accommodation, admissions and financial support and get help with international student enquiries, questions about student records, and exams.

- [www.imperial.ac.uk/student-hub](http://www.imperial.ac.uk/student-hub)

**Student Support Zone**

If you have moved home to take up your place at Imperial you will need to register with a new doctor (also known as a General Practitioner or GP) so that you can access NHS healthcare. It’s important that you register with a doctor soon after you arrive – don’t wait until you are sick, as this could delay your access to treatment.

Student Support Zone has lots of information about the resources available at Imperial and beyond to help you to stay healthy and happy. It’s a great place to start when you’re looking for some support – it covers advice about housing and money, health, wellbeing and maintaining a good work-life balance, and provides the details of who you can contact if you need some extra support.

- [www.imperial.ac.uk/student-support-zone](http://www.imperial.ac.uk/student-support-zone)

**Useful support contacts**

**Health and wellbeing**

Imperial College Health Centre

- 40 Prince’s Gardens, South Kensington Campus
- 020 7584 6301
- imperialcollege.hc@nhs.net
- [www.imperialcollegehealthcentre.co.uk](http://www.imperialcollegehealthcentre.co.uk)

Imperial College Dental Centre

- Prince’s Gardens, South Kensington Campus
- 020 7589 6623
- [www.imperialcollegededental.co.uk](http://www.imperialcollegededental.co.uk)
12. Student Records and Data

The Student Records and Data Team are responsible for the administration and maintenance of the student records for all students studying at the College. This includes enrolments, programme transfers, interruption of studies, withdrawals and processing of examination entry for research degree students. The team also use this information to fulfil reporting duties to the Student Loans Company, Transport for London and the UKVI, as well as other external bodies.

The Team is responsible for the processing of student results and awards on the student record system as well as the production and distribution of academic transcripts and certificates of award.

The Student Records and Data Team produce a variety of standard document requests for both current and previous students including council tax letters, standard statements of attendance and confirmation of degree letters.

Student records and examinations

+44 (0)20 7594 7268
student.records@imperial.ac.uk

Degree certificates

+44 (0)20 7594 8037
certificates@imperial.ac.uk

13. Work-life Balance

The pace and intensity of study at Imperial can be demanding so it’s important to find time for outside interests.

Graduate Students’ Union

The Graduate Students’ Union is the postgraduate arm of Imperial College Union. The GSU works alongside the Imperial College Union President to ensure that the requirements of postgraduate students are catered for. It also organises a number of academic and social events during the year.

Move Imperial

Imperial College has a wide range of sports and activities on offer that cater for all standards and abilities. We have a recreational activity offer, competitive sports teams and an elite sport programme. We are dedicated to ensuring we have a diverse, inclusive and exciting offer for all.

Whilst we are closely monitoring government advice, we are also beholden to the overarching College strategy of a phased return to campus and a reduction in on-campus activity until at
least the beginning of the 2020-21 academic year. In line with this, we are anticipating being able to begin to reopen some of our facilities from Monday 7 September; details will be communicated regularly to our community.

More information about Imperial student memberships and updates to our services can be found at:

www.imperial.ac.uk/ethos/memberships/students

With an annual fee of £30 you will get use of the gym and swimming facilities on our campuses.

www.imperial.ac.uk/sport

We have a huge collection of online resources, home workout videos, healthy recipes and playlists available to all as part of our MoveFromHome campaign, more information can be found at:

www.imperial.ac.uk/sport/movefromhome
14. Student feedback and representation

Feedback from students
The College and Union is committed to continually improving your education and wider experience and a key part of this is your feedback. Feedback is thoroughly discussed by your student representatives and staff.

Student representation
Student Representatives are recruited from every department to gather feedback from students to discuss with staff. More information about the role, and instructions on how to become an academic representative, are available on the Imperial College Union website.

www.imperialcollegeunion.org/your-union/your-representatives/academic-representatives/overview

Staff-Student Committee
Staff-Student Committees are designed to strengthen understanding and improve the flow of communication between staff and students and, through open dialogue, promote high standards of education and training, in a co-operative and constructive atmosphere. College good practice guidelines for staff-student committees are available here:

www.imperial.ac.uk/about/governance/academic-governance/academic-policy/student-feedback

Student hustings for MSc Environmental Technology Student Reps will be held in the first week of the Autumn Term. Nominations will be sent to the Student Union who will organise the online ballot later in October. If you are interested in standing as a rep please be ready to say a few words at the online hustings (see timetable) and/or contact Bill Sheate (Co-Director Core Course) at w.sheate@imperial.ac.uk
15. Student Surveys

Your feedback is important to your department, the College and Imperial College Union.

Whilst there are a variety of ways to give your feedback on your Imperial experience, the following College-wide surveys give you regular opportunities to make your voice heard:

- PG Student Online Evaluation (SOLE) module/lecturer survey or departmental equivalent
- Student Experience Survey (SES)

The PG SOLE module/lecturer survey (or equivalent for your department) runs at the end of the autumn and spring terms. This survey is your chance to tell us about the modules you have attended and the lecturers who taught them.

The Student Experience Survey (SES) is an opportunity to give your views on your experience beyond the lecture theatres or labs. This survey will cover a range of College services and on the Imperial College Union.

All these surveys are confidential and the more students that take part the more representative the results so please take a few minutes to give your views.

The Union’s “You Said, We Did” campaign shows you some of the changes made as a result of survey feedback:

- [www.imperialcollegeunion.org/you-said-we-did](http://www.imperialcollegeunion.org/you-said-we-did)

The Union’s response to surveys can be found here:

- [www.imperialcollegeunion.org/your-union/your-representatives/responses](http://www.imperialcollegeunion.org/your-union/your-representatives/responses)

If you would like to know more about any of these surveys or see the results from previous surveys, please visit:

- [www.imperial.ac.uk/students/academic-support/student-surveys/pg-student-surveys](http://www.imperial.ac.uk/students/academic-support/student-surveys/pg-student-surveys)

For further information on surveys, please contact the Registry’s Surveys Team at:

- [surveys.registrysupport@imperial.ac.uk](mailto:surveys.registrysupport@imperial.ac.uk)
Alumni Services
When you graduate you will be part of a lifelong community of over 190,000 alumni, with access to a range of alumni benefits including:

- discounts on further study at the College and at Imperial College Business School
- alumni email service
- networking events
- access to the Library and online resources
- access to the full range of careers support offered to current students for up to three years after you graduate
- access to our Alumni Visitor Centre at the South Kensington Campus, with free Wi-Fi, complimentary drinks, newspapers and magazines, and daytime left luggage facility

Visit the Alumni website to find out more about your new community, including case studies of other alumni and a directory of local alumni groups in countries across the world.

www.imperial.ac.uk/alumni

CEP has its own Alumni service for over 5000 alumni of the MSc in Environmental Technology and PhD students, including offering the only Imperial College postgraduate Alumni Mentoring Programme, and an email listserv providing fantastic job opportunities and contact with alumni. Many alumni also teaching on the MSc course and offer opportunities for summer research projects. More information will be provided in the Core Course Introduction.

Opportunities for Further Study
See Careers guidance provided throughout the year. A number of students continue with PhD studies within the Department or elsewhere.