

2018-19



Global Challenges



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Introduction

Welcome to Global Challenges

Global Challenges puts your degree in a broader context, connecting disciplines and considering the social, ethical and cultural dimensions of sustainable human development.

Combating climate change, establishing gender equality, preserving biodiversity, access to education and eliminating poverty are just some of the environmental and social pressures that will shape the coming century. They will alter how we live, the risks we face, and the ways that we govern a more interdependent world. Tackling these challenges will require the best available minds to measure and predict impacts and to identify solutions.

Our award-winning modules give you the opportunity to research and problem solve your choice of these challenges in multidisciplinary teams, using a range of new and diverse ways of working.

Module Design

The modules have been designed to complement your degree studies rather than to just give you more of the same type of work to do. For this reason, you will be expected to work in a very different way. We don't have any lectures, and you won't be told what to learn. You will need to make a lot of choices for yourself – this can be exciting, but also a bit scary. Your module leader and co-learners will help you to make good learning choices and to achieve excellent results. It doesn't matter what you think you're good at, or what you find hard – there will be something in every Global Challenges module that celebrates exactly who you are and helps you to achieve things that you might have thought would be very tricky. We will ask a lot of you, but we will support you all the way.

For each class, you will be given a contract of responsibility. This helps to make it clear exactly what is expected of you during the module. If there is anything that worries you on the contract, you should discuss it with your co-learner or the module leader.

Global Challenges Co-learning

On our first-year modules you will receive extra support during the classes from our module co-learners. The module leader will introduce each session and is always available to offer support, but you will also be assigned a co-learner. Our co-learners are PhD students and post-doctoral researchers from the College. We call them 'co-learners' because they have no specialist knowledge of the global challenge that you are studying, but they are very experienced at being independent learners and thinkers. The fact that you and your co-learner are both learning about your chosen topic together is really important – it means that they will be demonstrating their own approach to learning and practically showing you how they would go about researching a new topic. The most important role of co-learners is to help you to develop the learning skills that are critical for working on sustainable human development.

Your co-learners will not be making any decisions for you, but they will help to make sure that you understand the choices that you make and help you to get the most out of the

module. Having said that, your co-learners will also be responsible for marking your work, so you should make sure you listen to their advice!

By the time we get to our 3rd/4th year modules, you will already be more independent and not need individual co-learners. However, the module leader is available at any time should you need additional advice or guidance.

Global Challenges Values

The Global Challenges modules will help you to:

- foster an appreciation of the value of **interdisciplinary learning**
- develop confidence in your ability to **learn independently**
- develop a **realistic and evidence-based** approach to 'global challenges'
- develop an **empathic engagement** with the real world
- establish effective **team working and collaborative practice**
- explore **communication practices** and develop core skills

What type of work is involved in a Global Challenges module?

In order to help you to approach sustainable human development in an effective and innovative manner, you will be introduced to ways of thinking, learning and researching that come from a range of different disciplines. These include art and design, earth sciences, environmental sciences, environmental studies, economics, geography, history, politics and international relations.

What is Sustainable Human Development and Why is it Important?

Sustainable development is development that improves living conditions in the present without compromising the resources of future generations.

Development is not sustainable when we spend or use all our resources now, leaving future generations with nothing. Sustainable development is growing together, improving the thinking of others and respecting the environment.

To ensure sustainable development, we need to work together to make sure major changes are made to transform into a more just and equitable society. To achieve this, our leaders will have to commit to this change, but we must also do our part. For example, we must give our opinions on issues that affect children and young people, analysing and debating about the world we dream for ourselves and for future generations. We must also take positive actions in our own lives that contribute towards sustainable development like having respect for other people and for the planet.

Global Action for Sustainable Human Development

Created in 1945, the UN is the largest existing international organisation, of which almost all States in the world are members. It is tasked with maintaining peace and security in the world, helping solve the problems that affect us all, promoting respect for the human rights of all people (including children and young people) and providing support to countries to work together for this purpose.

In the year 2018, there are 193 UN Member States. In 2000, representatives from the (then) 189 Member States of the UN met to adopt the Millennium Declaration. This Declaration created a global alliance to combat poverty. After this meeting, the goals we now know as the Millennium Development Goals (MDGs) were developed.

The MDGs were eight goals that States created to guide joint efforts between international organisations and States to fight poverty and hunger in the world, stop diseases like HIV/AIDS, promote gender equality, and to ensure that more children are able to attend school, among other efforts. These goals were supposed to be achieved by the year 2015 and although much progress was made, there is still further work to be done.

From time to time, Member States delivered reports to the UN on their work to achieve these goals. The UN reviewed the States' progress and assessed their success in achieving the goals.

As the time period for the MDGs ended in 2015, the world and our governments still need to keep working to fully achieve the MDGs for all people, as well as tackle new issues and problems. For example, many people in the world— more than 1 billion people —continue to live in poverty and many others experience inequality, unfair treatment and discrimination.

More recently, the UN discussed what should be the global priorities that needed to be met within the next 15 years - from 2016 to 2030. These priorities are now called the Sustainable Development Goals (SDGs).

There are 17 Global Goals that cover a number of important issues for the world, including: ending extreme poverty, ensuring all children receive a good education, achieving equal opportunities for all and promoting better practices for consumption and production that will help make the planet cleaner and healthier.



In July 2015, Member States reached a final agreement on the SDGs. The aim of this agreement is to commit efforts towards ensuring that people around the world live better, without damaging the planet. States will work toward achieving them within the next 15 years, from 2016 to 2030. These Goals, which came after the MDGs ended, are known as the Sustainable Development Goals (SDGs).

The UN led an Open Working Group, comprised of Member States' representatives, which met 13 times throughout 2013 and 2014. Accompanied by a team of technical experts on education, health, climate and other topics, this group discussed the most pressing issues facing people around the world and standing in the way of improving life for all people and the planet. At the same time, discussions were taking place around the world with ordinary people, giving them the opportunity to express their ideas on what should be in the SDGs. From these discussions, the Open Working Group developed goals and targets that focus on a variety of different themes. For example, some of the topics covered include ending extreme poverty and hunger, and guaranteeing human rights, peace, gender equality, as well as the sustainable management of the environment and natural resources.

Thinking and Talking About Sustainable Human Development

When we think about tackling sustainable human development, we often hear words like multidisciplinary, interdisciplinary and transdisciplinary being used to describe new and fashionable ways of working. These terms have no commonly agreed definitions, and this can lead to confusion. In Global Challenges, we use the words as follows:

- **Multidisciplinary** – bringing together distinct ideas or methods from multiple disciplines to enhance understanding of a phenomenon (the disciplinary contributions remain distinct)
- **Interdisciplinary** – synthesising new methods or approaches to a phenomenon by combining disciplinary ideas or methods (the disciplinary roots of the contributions are acknowledged, but the product belongs to no discipline)
- **Transdisciplinary** – approaching a phenomenon with no disciplinary lens at all (completely independent of disciplinary boundaries)

Thinking outside of disciplinary boundaries can be incredibly helpful, but we must recognise that most of our education and learning experiences have occurred in a strongly disciplinary structure. We have been taught within this framework, and have chosen to specialise within disciplines and sometimes even sub-disciplines. Integrating ideas that step outside these boundaries must therefore begin with a recognition of why these boundaries exist in the first place, and what they mean to us and to the science and engineering professions.

Disciplinary Contexts

The great benefit of organising learning and research into disciplines is that it allows a division of labour and greater specialisation of knowledge (Holbrook, 2010). As we learn more and more about the natural world and our presence in it, there becomes too great a body of knowledge for each individual to know everything. In the interests of cultivating depth of knowledge, the disciplines serve us well. However, the disciplinary approach to the world becomes less useful as the disciplines become more bounded, and approaches and methodologies become distinct across disciplines. It might therefore be the case that sustainable human development makes demands of science and engineering that may best be answered from a non-disciplinary standpoint.

Within the domain of sustainable human development there are a number of critical tensions – possibly the most important of which being between the local and global context. Approaches to analysing problems, our valuing of knowledge and expertise and the engagement of communities and implementation of change are all part of this tension. The public discourse encourages us to value the global approach – we are told that global action is needed to combat sustainability challenges such as climate change. But is it global ‘action’ that is required, or rather global engagement with local action? Can any sustainability challenge be answered by a global or widely implemented homogenous response?

Complexity is the enemy of mastery

If science and engineering are problem-solving disciplines, and sustainable human development presents a number of problems, why is a new approach needed? The answer lies in the nature of the problem. Unlike our organisation of knowledge, research and technical processes, problems in the real world do not abide by disciplinary boundaries. This means that many problems require the expertise of more than one discipline to be effectively tackled. Hansson (1999) advocates interdisciplinary practice for solving problems of this nature. However, he also notes that interdisciplinarity, “no matter how desirable, is very hard to achieve” (Hansson 1999: p. 340).

There are two helpful approaches that might aid our understanding of why the complexity inherent in the real world presents problems to our existing disciplinary thinking.

Rittel and Weber (1973) have been very influential in their classification of problems as either being ‘tame’ or ‘wicked’. A wicked problem might be defined as one that meets the criteria set out below. These criteria also help us to understand why effective solutions are so hard to achieve.

The definition of a wicked problem (adapted from Norton, 2012)

1. There is no definitive formulation of the problem (the exact nature of the problem is hard to understand)
2. Wicked problems have no stopping rule (there is no ideal solution or marker that would indicate that the problem has been completely resolved)
3. Solutions to wicked problems are not true or false (they are usually good or bad, or more often better or worse)
4. There is no way to test the solution (implementing a solution will cause waves of intended and unintended effects over a limitless timescale)
5. Every attempt to solve the problem is the only attempt (by testing the solution you are changing the context and therefore creating a new problem and potential solution that is not tested)
6. Wicked problems do not have a set number of solutions (you can never know whether every solution has been considered)
7. Every wicked problem is essentially unique (when comparing even the most similar wicked problems, there will be some overriding characteristic that differs and is considered important)
8. Every wicked problem is a symptom of another problem (you cannot solve problems by tackling the symptoms alone)
9. Wicked problems can be framed in numerous equally valid ways (there is no correct explanation for a problem, or correct way to view a problem)
10. There is no immunity for unsuccessful intervention (in science, hypotheses are meant to be tested and either corroborated or falsified; whereas the solution to wicked problems needs to be right first time, there is no tolerance for mistakes)

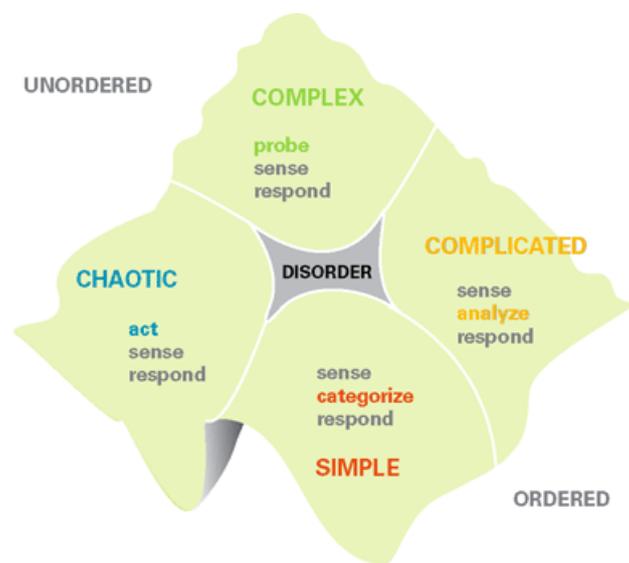
Approaching sustainable human development from a problem-solving perspective forces us to reduce complex real world problematic situations to simple, bounded design questions. This might explain why so many attempts to achieve difference and progress with sustainable human development do not succeed. Recognising and acknowledging the complexity in these contexts will require us to think, work and act differently.

Complex systems are nicely defined by Snowden and Boone (2007):

- they involve large numbers of interacting elements that interact in a non-linear fashion
- the history of the system is integrated with the present

- they are dynamic and are more than the sum of their parts
- they may appear ordered and predictable when they are not

Snowden's Cynefin Framework (2000) can further help us to see the difference in approach needed depending on the complexity of the situation. He defines four types of situation – simple, complicated, complex and chaotic. Simple and complicated situations are ordered, with obvious cause-and-effect relationships. Examination of the situation can help you to determine correct answers or actions. Complex and chaotic situations are not ordered and have no obvious cause-and-effect relationships. Correct actions or solutions cannot be pre-determined, but rather 'emerge' from the situation itself. He also goes on to describe a fifth state, 'disorder', where multiple perspectives vie for prominence, and there is much conflict.



Whether we view sustainable human development as a set of wicked problems, or as complex, chaotic or disordered situations, it is clear that standard problem-solving approaches are unlikely to achieve helpful solutions.

References

- Hansson, B. 1999. Interdisciplinarity: For what purpose? *Policy Sciences*, 32, 339-343
- Holbrook, J.B. (2010). The disciplining of peer review. In: Frodeman, R (ed.) and Thompson, J and Mitcham, C. (assoc. eds.) *The Oxford Handbook of Interdisciplinarity*. Oxford: Oxford University Press.
- Norton, B.G. (2012) The Ways of Wickedness: Analysing Messiness with Messy Tools. *Journal of Agricultural and Environmental Ethics* 25, 447-465
- Rittel, H. W. J., and Webber, M. M. (1973) Dilemmas in a General Theory of Planning. *Policy Sciences* 4, 155-169

Snowden, D.J. and Boone, M.E. (2007) A Leader's Framework for Decision Making. *Harvard Business Review* [online] Available from: <https://hbr.org/2007/11/a-leaders-framework-for-decision-making> (last accessed 19/12/2014)

Building Your Skill Profile

What skills will doing a Global Challenges module help me develop?

All Global Challenges modules have been designed to help you develop a range of skills that will be useful to you both in your disciplinary study for your degree, and in your future learning and employment.

This skillset comprises five categories, and we make sure that each Global Challenges module includes a balance of different skill building opportunities across all five categories.



Learning Fitness

Skills in this category help you to perform well in your studies and make you the best 'learner' you can possibly be. This category includes skills that build your 'Learning Fitness'.



Thinking

Skills in this category help you to develop advanced thinking capability. This includes independence of thought and critical thinking.



Handling Information

Skills in this category help you to find, evaluate and analyse different types of information. This includes both library research where you evaluate information produced by other people and empirical research to generate your own data.



Networking

This category includes communication, collaboration and team working skills.



Imagineering

This category includes skills that will help to make you an effective and fearless problem solver.



Learning Fitness

Maximising your learning fitness is critical to your success as an undergraduate student, and to future learning and working. The types of skills in this area that our modules promote include:

- Developing versatility as a learner
- Time management and meeting deadlines
- Coping with uncertainty
- Dealing with work and study stress
- Establishing and maintaining a good work-life balance
- Independent learning
- Managing disagreements and understanding different perspectives
- Being generous to yourself and building confidence in a range of settings
- Developing a real understanding of your strengths and weaknesses as a learner

Focus On... Learning Fitness

Developing your learning fitness involves maximizing your potential to learn by paying attention to a number of different factors:

- Neurobiology – put your brain in the best position to learn
 - maintain a good sleep-wake cycle by sleeping for at least eight hours at night, and trying to do as much of your work during the daytime as possible
 - maximize the nutrients available to your brain by eating regularly and trying to include healthy foods such as fruit and vegetables
 - get plenty of exercise to encourage a healthy balance of hormones and feel-good chemicals being released in the brain – raising your heart rate regularly will make you more alert and able to concentrate
- Sociobiology – make connections with your peers to help your learning
 - share things that you are finding difficult with other learners – you'll be surprised to see that many other people feel the same way as you
 - help others with things that you find easier, and they can help you with things that you find difficult – this type of social exchange also helps you to learn more effectively – teaching others is a great way to reinforce your own learning



Thinking

When you devote yourself to developing expertise in just one subject, you tend to get very good at the types of thinking required in that particular subject. You might not get many opportunities to develop and practice different types of thinking. Even if you continue to work and learn within your discipline in the future, you will also need to be able to think 'outside' your discipline with skills such as:

- critical thinking
- independent thinking
- interdisciplinary thinking
- reflexive practice
- reasoning and formulating an argument
- thinking and imagining with compassion and empathy
- building on your own prior experience and your internal resources
- building on the prior experience and resources of others
- tolerating uncertainty, complexity and dilemmas

Focus On... Reflexive Practice

Developing reflexive practice allows you to engage not only with the thing that you are learning, but also with the actual process of learning itself. You will become aware of what you find easy or hard, how well you complete different aspects of a task and how you perform in different types of situation. This allows you to then incorporate what you have observed about yourself into your continuing learning experience to further develop your learning potential.

- it's about noticing what is going well and what is not going so well
- it's thinking about how to get the most out of each and every learning experience
- it's using your self-observation to try to improve your performance
- you are not alone in working reflexively – we include many opportunities in all our classes to discuss your progress and experiences with your colleagues and lecturers



Handling Information

Developing the skills to find things out for yourself, evaluate the quality and relevance of different types of information and build your understanding of a new and challenging topic is really important to maximize your impact in the world. The following skills are critical in this area:

- asking good questions
- close reading
- accessing a variety of sources
- evaluating the quality of different sources
- analysing data
- evidencing an argument
- respecting and understanding the ideas of others
- generating your own data using appropriate methods
- performing library research
- performing and designing your own empirical research

Focus On... Asking Good Questions

The basis of any type of research or of building an understanding of a new topic is being able to ask the right questions. And more than that, you need to phrase those questions correctly so that you can answer them effectively.

- if you ask the right question, you'll be able to find the right type of information
- if you ask the right question, you'll be able to formulate the best response
- many types of writing start with asking a good question – no matter how good you are at writing, if your question is flawed, your argument will not be properly formed and you will not maximize your potential in your writing



Networking

Communicating your ideas, working collaboratively with others and understanding team dynamics are important in an increasingly connected world. Relevant skills include:

- team working
- collaborative working
- leadership
- communicating your ideas using a range of media
- writing
- speaking
- exchanging ideas
- meeting new people and forming new relationships
- learning from others

Focus On... Writing

Writing is not one single skill – you might be very good at some types of writing, but need to develop others. Different types of writing include:

- writing to inform
- writing to report
- writing to persuade
- writing to entertain
- writing to express yourself
- writing to educate
- writing to engage



Imagineering

We all have the potential to be highly creative – but it takes confidence, practice and opportunity. Creativity is critical to creating impact and change and lies at the core of many activities that might interest you, such as entrepreneurship, invention and real-world problem solving.

- problem solving
- design thinking
- thinking outside your discipline
- recognizing your unique and full potential
- divergent thinking
- creative working
- developing radical and fearless vision

Focus On... Imagineering

Did we make a word up here? I'm not sure, but if we did, that underlines the need for creativity. Global challenges have been a problem for many years, and many good engineers and scientists have failed to make an impact on these seemingly intractable problems. So, what will it take to create effective change?

- a technical mind
- a willingness to move beyond technical reality
- fearless and limitless imagination
- boundary-less thinking
- working with the implausible, the impossible and the un-imaginable

Global Challenges Observation Information

Observation by lecturers and co-learners

All Global Challenges modules are designed to be responsive and dynamic. This means that the exact activities that you complete in class, and the way that the module is designed is flexible and can be adjusted to best suit you as an individual student and your class as a group of students.

This is a very exciting way to approach learning and teaching, but it requires careful monitoring and consideration throughout to ensure that we make good choices. We want to make sure that you have enough support to tackle the things you find most difficult, and enough challenge to push you further on the things that you find easier. These choices are not the same from group to group, so it is really important that we get to know you and your class as well as we can.

For this reason, we engage in continuous observation during classes. We will pay attention during class discussions to remember what has been said and follow this up at a later point. We might join in with your group working discussions, or just listen in to see how you are getting on. We might watch how people are getting on – are people interested, bored, working through problems quickly or taking more time than we anticipated. We will also observe how you are working online by reviewing your contributions on Blackboard Learn. We can see how you are working as a team, how you are putting ideas together, and how you are approaching completing your work.

All this observation means that we can offer you choices on how to proceed with the module, and make adjustments to make sure that the module is offering you the best experience that it possibly can.

As well as using these observations in real-time to help you and your classmates specifically, we also review these observations within our teaching team to make changes to the modules for the following year. In this way we can continuously respond to your feedback and experience to improve the modules for future students. Furthermore, we can sometimes share these observations more widely across college to help other modules and departments improve their student experience.

When we use our observations in this way, we do not talk about individual students, and if we want to share an example of something that happened or something that you said, we do this anonymously, without identifying you.

Of course, if we want to share something amazing that you have done, we want you to take credit for this. In this case, we will always contact you to ask your permission to share your work or your experience.

In summary, our observations include:

- Things that we see and hear in class
- Examples taken from your work in progress or your final submission on Blackboard Learn
- Data from Blackboard Learn about how you have been working – such as how much time you have been logged in, at what time of day and on which days
- Comments or questions that you have made or asked in person or via email

Observation by external individuals

The Global Challenges modules are very different to a standard learning and teaching experience, and we have won both student-nominated and international education awards for the design and delivery of the modules. This means that other people are often very interested to come and experience what happens in a typical class.

You might see teaching staff from across College sitting in for a class, or even international guests who have travelled from around the world to observe a class.

These guests are not observing you as individuals, and are not judging you in any way. They have come to try and understand how our modules work, and to experience and understand a little bit of what you are experiencing in the class.

We will always introduce the guests, and give you as a class an opportunity to bring them up to speed on how the class works, and the specifics of your work. You are very welcome to talk to the guests if you would like to do so. However, if you don't want to talk to them, this is absolutely fine too.

Observation by you

With all this observation going on, it would be a shame if you were to miss out on joining in. There are lots of ways that you can observe other students to help improve your own learning and experience in the class.

If you pay attention to what is going on around you, take an interest in the work of other students and share how you are getting on, you will have a much richer learning experience. Learning from your fellow students, or peer learning, is one of the most important and enduring ways to learn in class. Seeing how other students approach their individual work or seeing how another team is collaborating can provide you with valuable insights into good practice and into your own approach.

Sometimes you will see something that is an excellent example of how to do something. You could try to incorporate something of this into your own approach. Sometimes you might see something that is an ineffective way of working – this might give you the opportunity to avoid following that same path or making that mistake.

As long as you are not copying the work of another student, there is nothing wrong with learning from those around you. Take inspiration from what you see and you'll soon find that you're inspiring other students too.

Global Challenges Modules 2018-19

The Global Challenges field of Imperial Horizons has ten different modules. You could take a Global Challenges module each year of your study here at Imperial, or you could mix and match them with modules from the other fields of Imperial Horizons. You do not need to have taken a previous Global Challenges module to join any of our second or third/fourth year modules.

Module	Length	Core Competencies
1 st Year Modules		
The World Today: Analysing Global Progress	8 weeks	<ul style="list-style-type: none"> • Independent and collaborative learning • Interdisciplinary research • Synthesis and knowledge building • Developing global perspectives
The World Today: Collecting and Understanding Data	8 weeks	
The World Today: Innovating for Change	8 weeks	
2 nd Year Modules		
Design for Sustainable Development	20 weeks	<ul style="list-style-type: none"> • Interdisciplinary complex systems analysis • Problem solving and design practices • Collaborative learning • Public engagement • Contextual exploration of cutting edge science Communication practices • Development of local perspectives • Empathic engagement with a real community
A SMART Life	20 weeks	
Sustainable ME	20 weeks	
Building Equality	20 weeks	
Building Happiness	20 weeks	
3 rd /4 th Year Modules		
Lessons from History	20 weeks	<ul style="list-style-type: none"> • Evidence-based practice • Evaluation and analysis • Integration of new insights from a range of events
Creative Futures	20 weeks	

- Translation of local to global perspectives

Awards

International Award



The Global Challenges field of Imperial Horizons was recognised by a European Commission award in 2015 for all of our modules. The award is for the **Integration of Sustainable Human Development into Engineering, Science and Technical Education**. A survey was carried out across the EU to examine the different ways that universities address sustainable human development, and our programme was recognised as one of the best ten programmes. We received our award at a ceremony in Barcelona last year.

Student Academic Choice Award



Students on our 3rd/4th year module **Lessons from History** nominated us for a Student Academic Choice Award for Best Innovation in 2015.

We were very proud to win the award, especially as it comes from students who have taken a Global Challenges module, worked hard and contributed a lot to the success of the programme.

We were nominated again for the same award in 2016 and in 2017 for Best Undergraduate Teaching.

HGC14 The World Today: Analysing Global Progress

The 17 Sustainable Development Goals provide us with a framework to organise our thinking and action around major global issues. But how effective are these goals at promoting change? How are issues conceptualised and communicated? How are communities engaged in enacting change for themselves and others?

This module will give you the opportunity to focus on a global issue that interests you, along with a team of like-minded students. As well as your own area of detailed study, you will have access and be able to inspire and encourage the progress of other teams by reviewing their work and finding out about the issues that they have been studying. For each global issue, we will have students focusing on global progress, use of data and innovating for change. This means our work will build into a greater collaborative project with multiple dimensions.

Although you will contribute individually to your projects, you will also be working in a student team with a co-learner to help your progress and keep you on track during the module. Our co-learners are PhD students with an interest in global issues and skill development. During the module we will help you to consider what skills are needed to tackle global issues and help you to set goals and work on these skills for yourself.

This is an active learning module with continuous assessment. This helps to minimise hard deadlines and encourages you to work a little at a time throughout the module. We will engage in many practical large and small team activities to develop an understanding of the complexity of global issues. There will be many opportunities to receive feedback – both from the co-learners and the module leaders.

Learning Objectives

On successful completion of the module you will be able to:

- Write a suitably focussed research question
- Perform library research to bring together a range of sources and resources pertinent to the research question
- Understand the requirements and methods for evaluating progress
- Analyse the range of sources collected to identify progress made, challenges remaining, and relevant policy and global co-operation initiatives
- Situate their own findings in a wider research context
- Show a developed understanding based on their own work
- Work collaboratively with other students to contribute to a wider project

- Make predictions about how the situation might change in the future

Indicative Core Content

You will work both in your module cohort and in teams alongside those in 'The World Today: Collecting and Understanding Data' and 'The World Today: Innovating for Change' to develop an in depth understanding of a single global challenge.

In this highly interactive module, you will undertake several big collaborative tasks to develop your understanding of global issues and help you to develop the thinking, problem solving and creativity skills necessary to tackle these issues. In addition, you will focus on a small area of study with a team of students from the different streams of the module to present an overview of a particular global issue. Your role will be to provide some input into strategic cooperation and goal setting at both a local and international level on your chosen issue.

Contract of Responsibility

The World Today: Analysing Global Progress

Attendance

1. I will try to attend every session of this module and understand that I must attend at least six out of the eight sessions, including the final three sessions in order to pass
2. If I am unavoidably absent, I will inform my co-learner of the reason before the session, or at the latest by midday on the following day
3. I will arrive at the lecture session promptly and understand that being late is discourteous is not acceptable
4. I will discuss any problems with attendance or punctuality with the module leader at the earliest opportunity

Group Working

5. I will be a productive member of both the whole Global Challenges group and my Discussion Group
6. I will be attentive during the weekly initial workshop and will ask questions or participate in discussions
7. I will participate actively in all activities during the discussion sessions

Independent Learning

8. I understand that the material presented during the workshops is a small part of the learning that is expected of me and I will need to apply this to my challenge area and carry out further reading and research as stimulated by the discussion sessions

Blackboard Learn

9. I will use Blackboard Learn to continue and document my independent learning and to collaborate and demonstrate good team working with other members of my discussion group
10. I will collaborate fully with my discussion group to produce a Wiki to document our investigations into our challenge area, and I will access the Wikis of other groups to leave questions and comments

Assessment

11. I understand that I am being continually assessed during this module and know that it is my responsibility to demonstrate development of core skills and good group working to my co-learner, both in the discussion sessions and on Blackboard Learn

Signed _____ Date _____

Group Working Guidelines

The World Today: Analysing Global Progress

Group working is an important and difficult skill to master. It's a good idea to start with a set of good practice rules, and reflect on them as your group work progresses. For example, you might want to consider:

- * Every group member should contribute their ideas and opinions to the discussion
- * Have respect for the ideas and opinions of other group members
- * Don't interrupt other group members when they are speaking
- * Don't dominate the discussion - give other people a chance to speak
- * Constructively criticise other people's arguments, but don't criticise each other
- * Listen when other people are speaking and respond when appropriate
- * Agree that there are no stupid questions or contributions - everyone has different knowledge and experience and this must be respected
- * Prepare between classes by completing the assigned readings, looking for further resources and by following up on interesting points from each session

Try to put together a set of rules that your group will stick to - you can revise them as the programme progresses:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Assessment (The World Today: Analysing Global Progress)

Your assessment in this module is composed of three elements:

- Module Performance (40%) - a continuous assessment of your critical engagement with the module content and process
- Wiki (40%) - produced in small groups in class time
- Group Presentation (20%) - a short presentation of key points of your global challenge

Your module performance mark is formed of two components. Your co-learner will be assessing your participation in discussions and your contribution to the learning of your group. Additionally, you will be asked to complete a learning inventory at the start of the module and to set yourself a learning goal. At the end of the module, you will be asked to comment on your achievement of that goal. This will count towards your Module Performance mark.

The mark for the wiki is composed of both a mark from your co-learner and a peer-mark. Each discussion group will mark the wiki of another group, and this mark will contribute towards the final wiki mark. Preparing to mark the wiki of another group will really help you to understand how to make the most of your own wiki. You will be given a detailed mark scheme to help you with this.

Your group presentation requires no formal preparation other than deciding the order in which you will speak. You will each speak for just one minute about the most important things you have learned in your group. You should not use any notes or visuals such as PowerPoint. The idea is that you just speak freely about your chosen topic. This might sound a little scary, but every year our students give fantastic presentations – this method is a great way of improving your presentation skills for more formal presentations in your degree studies.

Please note that all of your assessment will take place during class time.

Resit Policy (The World Today: Analysing Global Progress)

Module Performance

- If a student fails the module performance element of the module, this is weighted in the final grade and no resit opportunity is given
- If a student fails the module performance element by non-attendance, a fail grade is given for the whole module

Wiki

- If a student fails to submit or participate in the group wiki due to extenuating circumstances (i.e. due to timetabling issues with field trips) the student is offered assessment with a viva
- If a student fails to submit or participate in the group wiki otherwise, a mark of 0 is awarded and this is weighted in the final grade
- If a student fails their group wiki, they will be offered a viva to increase their module mark to a capped pass

Group Presentation

- If a student fails to participate in the group presentation due to extenuating circumstances (i.e. due to timetabling issues with field trips) the student is offered assessment with a viva
- If a student fails to participate in the group presentation otherwise, a mark of 0 is awarded and this is weighted in the final grade
- If a student fails their group presentation, they will be offered a viva to increase their module mark to a capped pass

HGC15 The World Today: Collecting and Understanding Data

The 17 Sustainable Development Goals provide us with a framework to organise our thinking and action around major global issues. But how effective are these goals at promoting change? How are issues conceptualised and communicated? How are communities engaged in enacting change for themselves and others?

This module will give you the opportunity to focus on a global issue that interests you, along with a team of like-minded students. As well as your own area of detailed study, you will have access and be able to inspire and encourage the progress of other teams by reviewing their work and finding out about the issues that they have been studying. For each global issue, we will have students focusing on global progress, use of data and innovating for change. This means our work will build into a greater collaborative project with multiple dimensions.

Although you will contribute individually to your projects, you will also be working in a student team with a co-learner to help your progress and keep you on track during the module. Our co-learners are PhD students with an interest in global issues and skill development. During the module we will help you to consider what skills are needed to tackle global issues and help you to set goals and work on these skills for yourself.

This is an active learning module with continuous assessment. This helps to minimise hard deadlines and encourages you to work a little at a time throughout the module. We will engage in many practical large and small team activities to develop an understanding of the complexity of global issues. There will be many opportunities to receive feedback – both from the co-learners and the module leaders.

Learning Objectives

On successful completion of the module you will be able to:

- Write a suitably focussed research question
- Assess different methods of data collection
- Collect their own data
- Perform basic analysis of their own data
- Draw conclusions based on their own collected data
- Situate their own findings in a wider research context
- Show a developed understanding based on their own work
- Work collaboratively with other students to contribute to a wider project
- Make predictions about how the situation might change in the future

Indicative Core Content

You will work both in your module cohort and in teams alongside those in 'The World Today: Analysing Global Progress' and 'The World Today: Innovating for Change' to develop an in depth understanding of a single global challenge.

In this highly interactive module, you will undertake several big collaborative tasks to develop your understanding of global issues and help you to develop the thinking, problem solving and creativity skills necessary to tackle these issues. In addition, you will focus on a small area of study with a team of students from the different streams of the module to present an overview of a particular global issue. Your role will be to provide some input into the use of data to support local and international progress on your chosen issue.

Contract of Responsibility

The World Today: Collecting and Understanding Data

Attendance

12. I will try to attend every session of this module and understand that I must attend at least six out of the eight sessions, including the final three sessions in order to pass
13. If I am unavoidably absent, I will inform my co-learner of the reason before the session, or at the latest by midday on the following day
14. I will arrive at the lecture session promptly and understand that being late is discourteous is not acceptable
15. I will discuss any problems with attendance or punctuality with the module leader at the earliest opportunity

Group Working

16. I will be a productive member of both the whole Global Challenges group and my Discussion Group
17. I will be attentive during the weekly initial workshop and will ask questions or participate in discussions
18. I will participate actively in all activities during the discussion sessions

Independent Learning

19. I understand that the material presented during the workshops is a small part of the learning that is expected of me and I will need to apply this to my challenge area and carry out further reading and research as stimulated by the discussion sessions

Blackboard Learn

20. I will use Blackboard Learn to continue and document my independent learning and to collaborate and demonstrate good team working with other members of my discussion group
21. I will collaborate fully with my discussion group to produce a Wiki to document our investigations into our challenge area, and I will access the Wikis of other groups to leave questions and comments

Assessment

22. I understand that I am being continually assessed during this module and know that it is my responsibility to demonstrate development of core skills and good group working to my co-learner, both in the discussion sessions and on Blackboard Learn

Signed _____ Date _____

Group Working Guidelines

The World Today: Collecting and Understanding Data

Group working is an important and difficult skill to master. It's a good idea to start with a set of good practice rules, and reflect on them as your group work progresses. For example, you might want to consider:

- * Every group member should contribute their ideas and opinions to the discussion
- * Have respect for the ideas and opinions of other group members
- * Don't interrupt other group members when they are speaking
- * Don't dominate the discussion - give other people a chance to speak
- * Constructively criticise other people's arguments, but don't criticise each other
- * Listen when other people are speaking and respond when appropriate
- * Agree that there are no stupid questions or contributions - everyone has different knowledge and experience and this must be respected
- * Prepare between classes by completing the assigned readings, looking for further resources and by following up on interesting points from each session

Try to put together a set of rules that your group will stick to - you can revise them as the programme progresses:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Assessment (The World Today: Collecting and Understanding Data)

Your assessment in this module is composed of three elements:

- Module Performance (40%) - a continuous assessment of your critical engagement with the module content and process
- Wiki (40%) - produced in small groups in class time
- Group Presentation (20%) - a short presentation of key points of your global challenge

Your module performance mark is formed of two components. Your co-learner will be assessing your participation in discussions and your contribution to the learning of your group. Additionally, you will be asked to complete a learning inventory at the start of the module and to set yourself a learning goal. At the end of the module, you will be asked to comment on your achievement of that goal. This will count towards your Module Performance mark.

The mark for the wiki is composed of both a mark from your co-learner and a peer-mark. Each discussion group will mark the wiki of another group, and this mark will contribute towards the final wiki mark. Preparing to mark the wiki of another group will really help you to understand how to make the most of your own wiki. You will be given a detailed mark scheme to help you with this.

Your group presentation requires no formal preparation other than deciding the order in which you will speak. You will each speak for just one minute about the most important things you have learned in your group. You should not use any notes or visuals such as PowerPoint. The idea is that you just speak freely about your chosen topic. This might sound a little scary, but every year our students give fantastic presentations – this method is a great way of improving your presentation skills for more formal presentations in your degree studies.

Please note that all of your assessment will take place during class time.

Resit Policy (The World Today: Collecting and Understanding Data)

Module Performance

- If a student fails the module performance element of the module, this is weighted in the final grade and no resit opportunity is given
- If a student fails the module performance element by non-attendance, a fail grade is given for the whole module

Wiki

- If a student fails to submit or participate in the group wiki due to extenuating circumstances (i.e. due to timetabling issues with field trips) the student is offered assessment with a viva
- If a student fails to submit or participate in the group wiki otherwise, a mark of 0 is awarded and this is weighted in the final grade
- If a student fails their group wiki, they will be offered a viva to increase their module mark to a capped pass

Group Presentation

- If a student fails to participate in the group presentation due to extenuating circumstances (i.e. due to timetabling issues with field trips) the student is offered assessment with a viva
- If a student fails to participate in the group presentation otherwise, a mark of 0 is awarded and this is weighted in the final grade
- If a student fails their group presentation, they will be offered a viva to increase their module mark to a capped pass

HGC16 The World Today: Innovating for Change

The 17 Sustainable Development Goals provide us with a framework to organise our thinking and action around major global issues. But how effective are these goals at promoting change? How are issues conceptualised and communicated? How are communities engaged in enacting change for themselves and others?

This module will give you the opportunity to focus on a global issue that interests you, along with a team of like-minded students. As well as your own area of detailed study, you will have access and be able to inspire and encourage the progress of other teams by reviewing their work and finding out about the issues that they have been studying. For each global issue, we will have students focusing on global progress, use of data and innovating for change. This means our work will build into a greater collaborative project with multiple dimensions.

Although you will contribute individually to your projects, you will also be working in a student team with a co-learner to help your progress and keep you on track during the module. Our co-learners are PhD students with an interest in global issues and skill development. During the module we will help you to consider what skills are needed to tackle global issues and help you to set goals and work on these skills for yourself.

This is an active learning module with continuous assessment. This helps to minimise hard deadlines and encourages you to work a little at a time throughout the module. We will engage in many practical large and small team activities to develop an understanding of the complexity of global issues. There will be many opportunities to receive feedback – both from the co-learners and the module leaders.

Learning Objectives

- On successful completion of the module you will be able to:
- Write a suitably focussed problem definition
- Perform library research to identify innovations that are in development to address the problem
- Understand the process of developing, testing, implementing and evaluating potential innovations
- Analyse the range of innovations identified to understand progress made, challenges remaining and relevant next steps
- Situate their own findings in a wider research context
- Show a developed understanding based on their own work
- Work collaboratively with other students to contribute to a wider project
- Make predictions about how the situation might change in the future

Indicative Core Content

You will work both in your module cohort and in teams alongside those in 'The World Today: Collecting and Understanding Data' and 'The World Today: Analysing Global Progress' to develop an in depth understanding of a single global challenge.

In this highly interactive module, you will undertake several big collaborative tasks to develop your understanding of global issues and help you to develop the thinking, problem solving and creativity skills necessary to tackle these issues. In addition, you will focus on a small area of study with a team of students from the different streams of the module to present an overview of a particular global issue. Your role will be to provide some input into existing innovations being implemented in your challenge area, and to suggest areas for future innovation.

Contract of Responsibility

The World Today: Innovating for Change

Attendance

23. I will try to attend every session of this module and understand that I must attend at least six out of the eight sessions, including the final three sessions in order to pass
24. If I am unavoidably absent, I will inform my co-learner of the reason before the session, or at the latest by midday on the following day
25. I will arrive at the lecture session promptly and understand that being late is discourteous is not acceptable
26. I will discuss any problems with attendance or punctuality with the module leader at the earliest opportunity

Group Working

27. I will be a productive member of both the whole Global Challenges group and my Discussion Group
28. I will be attentive during the weekly initial workshop and will ask questions or participate in discussions
29. I will participate actively in all activities during the discussion sessions

Independent Learning

30. I understand that the material presented during the workshops is a small part of the learning that is expected of me and I will need to apply this to my challenge area and carry out further reading and research as stimulated by the discussion sessions

Blackboard Learn

31. I will use Blackboard Learn to continue and document my independent learning and to collaborate and demonstrate good team working with other members of my discussion group
32. I will collaborate fully with my discussion group to produce a Wiki to document our investigations into our challenge area, and I will access the Wikis of other groups to leave questions and comments

Assessment

33. I understand that I am being continually assessed during this module and know that it is my responsibility to demonstrate development of core skills and good group working to my co-learner, both in the discussion sessions and on Blackboard Learn

Signed _____ Date _____

Group Working Guidelines

The World Today: Innovating for Change

Group working is an important and difficult skill to master. It's a good idea to start with a set of good practice rules, and reflect on them as your group work progresses. For example, you might want to consider:

- * Every group member should contribute their ideas and opinions to the discussion
- * Have respect for the ideas and opinions of other group members
- * Don't interrupt other group members when they are speaking
- * Don't dominate the discussion - give other people a chance to speak
- * Constructively criticise other people's arguments, but don't criticise each other
- * Listen when other people are speaking and respond when appropriate
- * Agree that there are no stupid questions or contributions - everyone has different knowledge and experience and this must be respected
- * Prepare between classes by completing the assigned readings, looking for further resources and by following up on interesting points from each session

Try to put together a set of rules that your group will stick to - you can revise them as the programme progresses:

- 1.
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- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Assessment (The World Today: Innovating for Change)

Your assessment in this module is composed of three elements:

- Module Performance (40%) - a continuous assessment of your critical engagement with the module content and process
- Wiki (40%) - produced in small groups in class time
- Group Presentation (20%) - a short presentation of key points of your global challenge

Your module performance mark is formed of two components. Your co-learner will be assessing your participation in discussions and your contribution to the learning of your group. Additionally, you will be asked to complete a learning inventory at the start of the module and to set yourself a learning goal. At the end of the module, you will be asked to comment on your achievement of that goal. This will count towards your Module Performance mark.

The mark for the wiki is composed of both a mark from your co-learner and a peer-mark. Each discussion group will mark the wiki of another group, and this mark will contribute towards the final wiki mark. Preparing to mark the wiki of another group will really help you to understand how to make the most of your own wiki. You will be given a detailed mark scheme to help you with this.

Your group presentation requires no formal preparation other than deciding the order in which you will speak. You will each speak for just one minute about the most important things you have learned in your group. You should not use any notes or visuals such as PowerPoint. The idea is that you just speak freely about your chosen topic. This might sound a little scary, but every year our students give fantastic presentations – this method is a great way of improving your presentation skills for more formal presentations in your degree studies.

Please note that all of your assessment will take place during class time.

Resit Policy (The World Today: Innovating for Change)

Module Performance

- If a student fails the module performance element of the module, this is weighted in the final grade and no resit opportunity is given
- If a student fails the module performance element by non-attendance, a fail grade is given for the whole module

Wiki

- If a student fails to submit or participate in the group wiki due to extenuating circumstances (i.e. due to timetabling issues with field trips) the student is offered assessment with a viva
- If a student fails to submit or participate in the group wiki otherwise, a mark of 0 is awarded and this is weighted in the final grade
- If a student fails their group wiki, they will be offered a viva to increase their module mark to a capped pass

Group Presentation

- If a student fails to participate in the group presentation due to extenuating circumstances (i.e. due to timetabling issues with field trips) the student is offered assessment with a viva
- If a student fails to participate in the group presentation otherwise, a mark of 0 is awarded and this is weighted in the final grade
- If a student fails their group presentation, they will be offered a viva to increase their module mark to a capped pass

HGC21 Design for Sustainable Development

This module offers you the chance to explore international development with a detailed real-world case study analysis. You will focus on identifying the issues faced by the community, the key stakeholders and their varied perspectives on the problems.

You will then work in teams to design a practical solution to an issue that you have identified as being critical for the community. You will begin by producing multiple conceptual designs before voting to decide which are the strongest ideas to take forward to technical specification and finally presentation to the community.

You will have a large amount of freedom to focus on the aspects of international development that you are most interested in. Following the completion of the module, your assignment will be submitted to the national [Engineers Without Borders \(EWB-UK\)](#)



UK
ENGINEERS
WITHOUT BORDERS

[competition](#), where you'll compete against students from other universities for an amazing prize.

We work closely with EWB-UK to ensure that the project work that you complete as part of Imperial Horizons meets all the requirements of the national competition. This means that you do one piece of work, and it is eligible both to be graded for Horizons and to be entered into the competition.

Learning Objectives

On successful completion of the module you will:

- Understand the complexity of trying to define development; and develop and justify the use of your own definition
- Understand the specifics of the design brief provided, and use soft systems methodology to fully explore and analyse the problematical situation you will be designing for
- Learn how to write a well-defined design question that will be answered during the project using SMART objectives
- Design a series of potential solutions to the design question
- Analyse the potential solutions using a binary dominance matrix to identify the solution that is most likely to be successful
- Work up the final design into a fully specified solution and identify any further expertise that would be required to complete bring the design up to a standard for immediate implementation
- Show consideration of the 'global dimension' (social, cultural, economic and sustainability perspectives) in the design solution
- Create an implementation guide that introduces the design concept, addresses issues such as implementation, operation and maintenance and tackles the issue of local engagement with the concept
- Plan, monitor and review their progress as an independent learner

Indicative Core Content - Design for Sustainable Development

Common Core

- Defining Poverty/International Development – look at different definitions of poverty and identify the perspectives to which they relate; look at how different definitions exclude different groups of people from being identified as experiencing poverty
- Boundary Critique – use boundary critique to tackle complex real-world situations
- Soft Systems Methodology (SSM) – use SSM techniques to analyse a case study of poverty, identify key stakeholders and world views, and spheres of power and influence

Project Focus

- The Design Brief – develop a considered understanding of the brief, complemented by additional research into the local context of the brief; use soft systems methodology to generate a deeper analysis and understanding of the problems that need addressing
- Develop a Design Question – using SMART objectives, develop a design question that will structure and direct the remainder of the project
- Design Conceptual Solutions – generate a series of conceptual designs that could be applied to tackle the problems outlined in the brief and that could answer the design question
- Evaluate Concepts Using BDM – identify criteria for evaluation and construct a weighted binary dominance matrix to evaluate the potential solutions, identifying the most likely to be successful
- Produce a Full Technical Specification for the Chosen Concept – work up the selected design into a full technical specification (including highlighting areas where additional expertise might be required)
- Create an Implementation Guide - introduce the design concept, and address issues such as implementation, operation and maintenance and tackles the issue of local engagement with the concept

Class Schedule - Design for Sustainable Development

Monday 8 th October	Defining international development, poverty and sustainability; introduction to soft systems methodology	Common Core
Monday 15 th October		
Monday 22 nd October		
Monday 29 th October	Preparation of case study analysis (deadline for submission of case study analysis 6pm Monday 5th November)	Project Focus
Monday 5 th November		
Monday 12 th November	Feedback on case study analysis and development of design questions	
Monday 19 th November		
Monday 26 th November	Conceptual design development (deadline for completion of sketch book and upload of best design 6pm Monday 10th December)	
Monday 3 rd December		
Monday 10 th December		
Monday 14 th January	Feedback on conceptual designs, result of vote and team formation	
Monday 21 st January	Technical specification of chosen design, and development of design portfolio (deadline for submission of portfolio for review 6pm Monday 11th February)	
Monday 28 th January		
Monday 4 th February		
Monday 11 th February		
Monday 18 th February	Feedback and revisions of design portfolio	
Monday 25 th February	Development of implementation plan and supporting media materials (deadline for submission of implementation package and final portfolio 6pm Monday 18th March)	
Monday 4 th March		
Monday 11 th March		
Monday 18 th March		

Contract of Responsibility

Design for Sustainable Development

Attendance

1. I will try to attend every session of this module and understand that I must attend at least fifteen out of the twenty sessions in order to pass
2. If I am unavoidably absent, I will inform module leader of the reason before the session, or at the latest by midday on the following day
3. I will arrive at the sessions promptly and understand that being late is discourteous to the rest of my group
4. I will discuss any problems with attendance or punctuality with the module leader at the earliest opportunity

Group Working

5. I will be a productive member of my project group
6. I will participate actively during the sessions
7. I will undertake independent research and idea development between sessions and will share this with my group via Blackboard Learn

Independent Learning

8. I understand that this project module is an independent learning module - I am responsible for my learning and development during this programme

Blackboard Learn

9. I will use Blackboard Learn to continue and document my independent learning and to collaborate and demonstrate good team working with other members of my group

Assessment

10. I understand that I am being continually assessed during this module and that I must complete all the elements of assessment in order to pass the module
11. I understand that for group submissions, I must complete a group contribution form that details my contribution to the submission
12. I understand that formal assessment of my project will include the production of a 10-page design portfolio, the final version of which will be submitted to the Engineers Without Borders national competition

Signed _____ Date _____

Assessment - Design for Sustainable Development

Your assessment for this module is composed of four elements:

- Design Brief Analysis – written report (20%)
- Presentation of Conceptual Designs – graphic documentation of designs and presentation (15%)
- Final Concept Proposal – including full technical specification and pitch presentation (50%)
- Implementation Guide (15%)

Your Design Brief Analysis

Your design brief analysis should include:

1. An overview rich picture
2. Three 'world view' rich pictures
3. A 'purposeful activity' rich picture
4. 1000-2000 word summary, including:
 - 4.1. The key elements of the design brief
 - 4.2. How your rich pictures have developed your understanding of what life is like for someone living in the community

The rich pictures can be photographed and uploaded individually, or copied and pasted into your document. They should be hand drawn.

Your Conceptual Designs

You should develop your conceptual designs in your sketchbook – you should try to fill the book with as many ideas as possible. Remember it doesn't matter whether the designs are practical or would work in the real world. The more ideas you get down on paper, the more creative your final choice will be. You will submit the sketchbook as part of your assessment.

In addition, your best design series (three linked designs) should be submitted online via Blackboard Learn. All students will vote over the Christmas break for the designs that they think are the best to take forward to technical specification.

Design Portfolio

Your design portfolio should contain:

1. Evidence of your design brief analysis (at least one of your rich pictures and a commentary – you may need to redraw this as you will now be working in a different team) describing the value of the rich picture in helping you understand more about the community)

2. Your design question (and a short commentary about the evolution of the question throughout the project, or any difficulty you had defining the design question)
3. The conceptual design that you began with after Christmas (and a commentary about how you developed this design using the binary dominance matrix)
4. The technical specification
5. A brief description of how your design will be implemented

Your Implementation Package

Your implementation package should be designed for the community. You should create a multimedia package that describes your design and provides information about implementation such as training requirements, funding and maintenance.

Your package might include:

- a filmed presentation
- slides
- animation
- graphics
- voice over
- pamphlets and posters
- film

Resit Policy (Design for Sustainable Development)

Group Written Assignments

- If a student fails to submit or participate in the group assignment a mark of 0 is awarded and this is weighted in the final grade
- If a student fails their group project, they will be offered a viva to increase their module mark to a capped pass

Individual Written Assignments

- If a student fails to submit their individual assignment, they receive a mark of 0 and this is weighted in their final grade
- If a student fails their individual assignment, they will be offered the chance to resubmit their assignment to increase their module mark to a capped pass

Group Presentation

- If a student fails to participate in the group presentation due to extenuating circumstances (i.e. due to timetabling issues with field trips) the student is offered assessment with a viva
- If a student fails to participate in the group presentation otherwise, a mark of 0 is awarded and this is weighted in the final grade

- If a student fails their group presentation, they will be offered a viva to increase their module mark to a capped pass

Group Multimedia Project

- If a student fails to submit or participate in the group project a mark of 0 is awarded and this is weighted in the final grade
- If a student fails their group project, they will be offered a viva to increase their module mark to a capped pass

HGC27 A SMART Life

Explore the concept of a smart city and investigate whether any areas of your daily life could be innovated with a data driven approach.

Work alongside other students studying sustainability, happiness and equality to explore the concept of the 'smart city'. What does a data-responsive environment really look like? What elements of your own life are 'data-driven'? Using a range of innovative techniques, map the impact of 'data' on your daily life. Develop potential applications of data-responsive technologies in a range of everyday situations and choose one to test in the real world.

Learning Objectives

On successful completion of the module you will:

- Understand the premise, benefits and challenges of a 'smart city'
- Apply the responsive, data-driven approach to innovating other aspects of daily life
- Create a personalised brief – analysing your own life to identify opportunities to innovate
- Develop a rationale for assessing the needs, benefits and success of implementing such an innovation
- Design and test a targeted innovation in your own life
- Evaluate the impact of the innovation

Indicative Core Content

You will begin by examining a case study of a smart city. You will then explore the concept of a smart city and apply the responsive data driven approach to various different elements of daily life (e.g. transport, education, household, healthcare, arts, entertainment). You will develop a rationale and method for assessing the benefits (or not) of smart processes. You will then create your own briefs using video or photo diaries and rotate through a number of mini design cycles before picking one idea to develop, prototype and test.

Contract of Responsibility

A SMART Life

Attendance

1. I will try to attend every session of this module and understand that I must attend at least fifteen out of the twenty sessions in order to pass
2. If I am unavoidably absent, I will inform my module leader of the reason before the session, or at the latest by midday on the following day
3. I will arrive at the sessions promptly and understand that being late is discourteous to the rest of my group
4. I will discuss any problems with attendance or punctuality with the module leader at the earliest opportunity

Group Working

5. I will be a productive member of my project group
6. I will participate actively during the sessions
7. I will undertake independent research and idea development between sessions and will share this with my group via Blackboard Learn

Independent Learning

8. I understand that this project module is an independent learning module - I am responsible for my learning and development during this programme

Blackboard Learn

9. I will use Blackboard Learn to continue and document my independent learning and to collaborate and demonstrate good team working with other members of my group

Assessment

10. I understand that I am being continually assessed during this module and that I must complete all the elements of assessment in order to pass the module
11. I understand that for group submissions, I must complete a group contribution form that details my contribution to the submission

Signed _____ Date _____

Assessment – A SMART Life

Your assessment for this module is composed of four elements:

- Smart City Poster (10%)
- Video/Photo Diary Brief and Analysis (30%)
- Wiki – Documentation of mini design cycles (20%)
- Final Design Portfolio (40%)

HGC28 Sustainable ME

Evaluate your own sustainability footprint and design and test a range of sustainability innovations to limit your impact on the environment.

Work alongside other students studying smart living, happiness and equality to explore what sustainability means to you. Is sustainability all about energy and recycling, or is there more to it than that? What can you as an individual do in your life and community to live more sustainably? Using a range of innovative techniques, map your own impact on the planetary ecosystem. Develop a range of initiatives to moderate that impact and choose your favourite to test in the real world.

Learning Objectives

On successful completion of the module you will:

- Understand the premise, benefits and challenges of sustainable living
- Develop an individual analysis of your planetary footprint
- Create a personalised brief – analysing your own life to identify opportunities to increase sustainable practice
- Develop a rationale for assessing the needs, benefits and success of implementing such a change
- Design and test a targeted sustainability initiative in your own life
- Evaluate the impact of the initiative

Indicative Core Content

You will begin by investigating your own planetary footprint. You will then explore the idea of sustainable living on an individual level. You will develop a method of monitoring your own impact on the planet. You will then create your own briefs using video diaries and rotate through a number of mini design cycles before picking one idea to develop, prototype, test and evaluate.

Contract of Responsibility

Sustainable ME

Attendance

1. I will try to attend every session of this module and understand that I must attend at least fifteen out of the twenty sessions in order to pass
2. If I am unavoidably absent, I will inform my module leader of the reason before the session, or at the latest by midday on the following day
3. I will arrive at the sessions promptly and understand that being late is discourteous to the rest of my group
4. I will discuss any problems with attendance or punctuality with the module leader at the earliest opportunity

Group Working

5. I will be a productive member of my project group
6. I will participate actively during the sessions
7. I will undertake independent research and idea development between sessions and will share this with my group via Blackboard Learn

Independent Learning

8. I understand that this project module is an independent learning module - I am responsible for my learning and development during this programme

Blackboard Learn

9. I will use Blackboard Learn to continue and document my independent learning and to collaborate and demonstrate good team working with other members of my group

Assessment

10. I understand that I am being continually assessed during this module and that I must complete all the elements of assessment in order to pass the module
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Signed _____ Date _____

Assessment – Sustainable ME

Your assessment for this module is composed of four elements:

- Planetary Footprint Poster (10%)
- Video/Photo Diary Brief and Analysis (30%)
- Wiki – Documentation of mini design cycles (20%)
- Final Design Portfolio (40%)

HGC29 Building Equality

Explore ways to measure, promote and celebrate equality in different cultures and design the optimum community balancing diversity and unity.

Work alongside other students studying sustainability, smart living and happiness to explore the concept of equality. Looking at a variety of international standards and measures of equality, think about what equality means to you in your life and community. Using a range of innovative techniques, map your own experience of equality. Develop a range of interventions for boosting equality in your community and test your favourite in the real world.

Learning Objectives

On successful completion of the module you will:

- Identify key inequalities that exist in the world today
- Understand how equality can be promoted, supported and measured
- Create a personalised brief – analysing a community to identify opportunities to increase equality
- Develop a tool for measuring equality in this community
- Design an optimal community that prioritises equality for all members
- Evaluate the likely success of the design and any inequalities that remain or emerge de novo.

Indicative Core Content

This module will create an overarching critique of the concept of equality. You will begin by examining a range of types of equality, and how these equalities are valued, supported and measured. You will then develop your own measurement tool for assessing equality within a specific community.

You will create a video or photo diary brief of a community to which you belong, identifying both equalities and inequalities.

Contract of Responsibility

Building Equality

Attendance

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Assessment – Building Equality

Your assessment for this module is composed of four elements:

- Equality in the Year 20XX Poster (10%)
- Video/Photo Diary Brief and Analysis (30%)
- Wiki – Documentation of mini design cycles (20%)
- Final Community Design Portfolio (40%)

HGC210 Building Happiness

Explore the concept of happiness and design a way to measure happiness. Test a variety of measures to improve happiness ratings in the community.

Work alongside other students studying sustainability, smart living and equality to explore the concept of happiness. Using a variety of 'theories' of happiness, think about what happiness means to you in your life and community. Develop your own theory of happiness and a tool for measuring how happy people are in a range of situations. Can 'happier' living be promoted? Develop a range of ideas to increase happiness and test your favourite in the real world.

Learning Objectives

On successful completion of the module you will:

- Examine key theories relating to 'happiness' in the world
- Define how 'happiness' can be promoted, supported and measured
- Create a personal definition or theory of happiness
- Create a personalised brief – analysing a community to identify opportunities to increase happiness
- Develop a tool for measuring happiness in this community
- Design an optimal community that prioritises happiness for all members
- Evaluate the likely impact of the design

Indicative Core Content

This module will create an overarching critique of the concept of happiness. You will begin by examining a range of theories of happiness, and develop your own theoretical understanding of the concept. You will then design a tool to measure their concept of happiness in a specific community.

You will create a video or photo diary brief of a community to which you belong, identifying opportunities to increase happiness.

Contract of Responsibility

Building Happiness

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Assessment – Building Happiness

Your assessment for this module is composed of four elements:

- Personal Happiness Theory Poster (10%)
- Video/Photo Diary Brief and Analysis (30%)
- Wiki – Documentation of mini design cycles (20%)
- Final Community Design Portfolio (40%)

HGC31 Lessons from History

This module offers you the opportunity to learn about significant global events such as natural disasters, conflicts and humanitarian crises from a historical, cultural and scientific perspective.

Organised as a team-based learning programme, you will study set materials and draw key learning points from each historical case study. You will then work in teams to apply this learning to the modern world, specifically thinking about policies for future disaster mitigation and managing global challenges.

Learning Objectives

On successful completion of the module you will have:

- a systematic knowledge and critical understanding of each historical event covered
- synthesised a set of key learning points from each historical event and its legacy
- applied these to current approaches to managing global challenges, suggesting areas where improvements could be made
- identified areas for further self-directed study and developed considered insights using inputs from a range of sources and disciplines to construct a critical review of our attempts to manage the world in which we live
- engaged with the ethical, social, economic and political aspects of each event analysed
- planned, monitored and evaluated your own learning, and developed methods of accountability within your team

Indicative Core Content

This module requires examination of a number of key historical events that can inform our thinking about risk and disaster management, and reflect the complexity of our interactions with the world. You will be required to apply key insights derived from each event to current strategy and policy, and identify areas for improvement. Each of the following events will be considered, along with their legacy: Nuclear sign

- Chernobyl (nuclear safety)
- Aral Sea Regression (ecosystem destruction)
- Challenger Disaster (technological and political disaster)
- South East Asia Tsunami (large scale, multinational natural disaster)
- Haiti Earthquake (natural disaster with problematic disaster response)
- Great Chinese Famine (food security)
- Sudan Conflict (war and fragile states)
- Eyjafjallajökull Eruption (risk management)
- L.A. Riots (civil unrest)
- B.S.E. Crisis

Class Schedule - Lessons from History

Thursday 11 th October	Introduction
Thursday 18 th October	Cycle One
Thursday 25 th October	
Thursday 1 st November	
Thursday 8 th November	Cycle Two
Thursday 15 th November	
Thursday 22 nd November	
Thursday 29 th November	Cycle Three
Thursday 6 th December	
Thursday 13 th December	
Thursday 17 th January	Cycle Four
Thursday 24 th January	
Thursday 31 st January	
Thursday 7 th February	Cycle Five
Thursday 14 th February	
Thursday 21 st February	
Thursday 28 th March	Cycle Six
Thursday 7 th March	
Thursday 14 th March	
Thursday 21 st March	Final Assessment

Contract of Responsibility

Lessons from History

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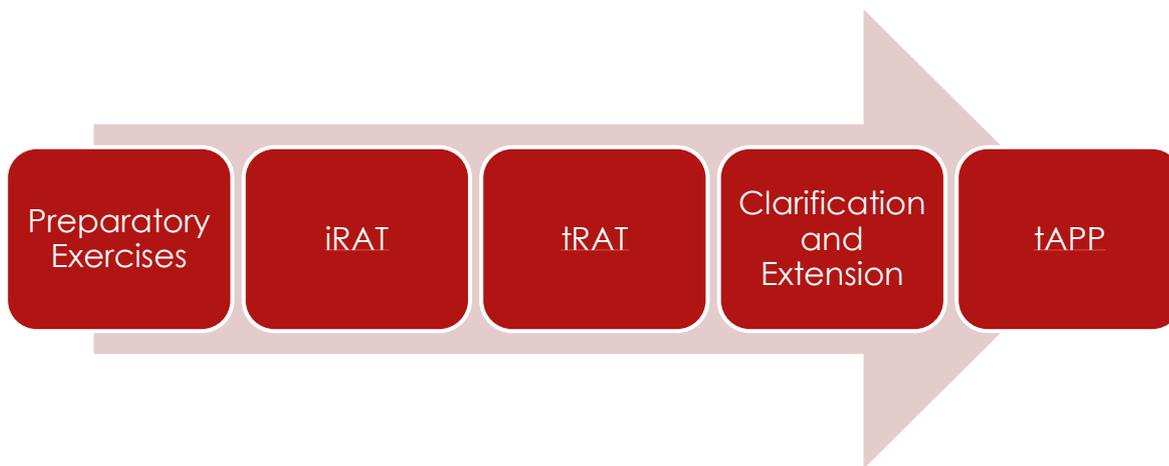
Assessment - Lessons from History

Your assessment for this module is composed of four elements:

- Team based learning assignments - tests of comprehension of core material (20%)
- Application exercises – short answer questions applying key learning points to contemporary issues and strategy (40%)
- Essay – integrating learning from several of the events covered to create a plan for future disaster management (40%)

Team Based Learning Process

Each cycle of this team based learning module takes place over three weeks. In the first week we complete the preparatory exercises. In the second week we complete the iRAT, tRAT and clarification and extension components. In the final week we complete the tAPP. The whole process sounds a bit complicated, but actually it is really simple. Once we've all done it once, it will make much more sense.



Preparatory Exercises

Large group and study team activities to introduce the events that we will be studying, and to define what we need to learn for each event; portfolio of materials presented

iRAT

Individual Readiness Assurance Test – 10 multiple choice questions completed on paper under exam conditions at the start of the session – tests your understanding of the materials provided

tRAT

Team Readiness Assurance Test – repeat the test in your study groups – negotiate the correct answers and use the scratch card to see if you are right or not

Clarification and Extension

Clarification and Extension – check the answers to the tests, and then develop some key questions about the topic – these will be answered in class the next week

tAPP

Team Application Exercise – research the answer to your application question – you will need to provide five pieces of evidence to support your answer – this must be uploaded to Blackboard Learn by the team secretary by 6pm of the third session in the cycle

Mark Allocations

Marks from your iRAT and tRAT as well as your tAPP will count towards your final grade. You will be given lots of information and feedback to help you with these assignments in class.

Resit Policy (Lessons from History)

iRAT

- If a student does not complete an iRAT due to extenuating circumstances, the individual iRAT will be exempted from the weighting of their final grade
- If a student does not complete an iRAT otherwise, they will be awarded 0 marks and this will be weighted in their final grade
- If a student fails an individual iRAT this will be weighted in their final grade
- If a student receives a fail grade across all iRATs, this will be weighted in their final grade

tRAT

- If a student does not complete a tRAT due to extenuating circumstances, the individual tRAT will be exempted from the weighting of their final grade
- If a student does not complete a tRAT they will be awarded 0 marks and this will be weighted in their final grade
- If a student fails an individual tRAT this will be weighted in their final grade
- If a student receives a fail grade across all tRATs, this will be weighted in their final grade

tAPP

- If a student does not complete a tAPP due to extenuating circumstances, the individual tAPP will be exempted from the weighting of their final grade
- If a student does not complete a tAPP they will be awarded 0 marks and this will be weighted in their final grade
- If a student fails an individual tAPP this will be weighted in their final grade

- If a student receives a fail grade across all tAPPs, this will be weighted in their final grade

Individual Essay

- If a student does not submit their individual essay, they receive 0 marks and this is weighted in their final grade
- If a student fails their individual essay, they will be offered the opportunity to resubmit the essay for an increased module mark capped at a pass

HGC33 Creative Futures

What is the future? Is it something that can be predicted, planned for or even created? How much control do we have over the future? Can we mitigate potential problems of the future? This module will introduce a range of 'horizon scanning' techniques – from the more data and technology driven predictions, to the more creative and imagination based methods. Working in teams, you will have the opportunity to test these methods and generate your own visions of the future. Towards the end of the module, we will bring all our work together and collaborate to produce a printed almanac of the future, with students generating their own copy, design and illustrations and forming their own editorial team to get the manuscript to print.

Learning Objectives

On successful completion of the module you will have:

- Identify and use a range of methods relevant to horizon scanning
- Summarise relevant literature and theory relating to our concept of the future or futures
- Use an appropriate method to perform an analysis of a potential future phenomenon
- Explore potential responses to that phenomenon and create a series of potential future visions
- Create a narrative that describes a response to that phenomenon
- Work collaboratively to produce a coherent printed record of the collected futures explored by the whole class

Indicative Core Content

The Creative Futures module allows you to explore the complex idea of 'horizon scanning'. You will be asked to look for evidence of a range of emerging technologies, shifts in social and cultural practices and trends in local and global policy to imagine our future world. The fusion of man and machine, programmable matter, artificial photosynthesis, the exocortex and the colonisation of space are all 'signals for change' that we might be facing in the future. They will impact the way in which we deal with today's global challenges, such as climate change, global power shifts and new connectivity.

Module content includes:

- Exploration of horizon scanning methods such as causal layered analysis, future history, back-view mirror analysis, futures workshops (Jungk) and visioning
- Testing various methods to produce a series of creative future forecasts
- Developing a range of potential responses to such futures and planning a series of pragmatic steps to allow the creation of a sustainable future
- Sharing individual future forecasts in teams to create an expansive vision of a range of futures-based phenomena

- Working collaboratively to produce a printed 'almanac' - including editing, peer review, layout and design

Contract of Responsibility

Creative Futures

Attendance

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Signed _____ Date _____

Assessment - Creative Futures

Your assessment for this module is composed of four elements:

- Online portfolio documenting (40%):
 - (i) Understanding of horizons scanning methods (10%)
 - (ii) Response to futures literature (10%)
 - (iii) Application of a range of methods to create a future forecast (10%)
 - (iv) Development of a response to a potential vision of the future (10%)
- Written futures narrative (40%)
- Contribution and role in production of almanac (20%)

Missed Assessment Due to Mitigating Circumstances

Applicable to all Global Challenges modules

Imperial College has very strict rules about the circumstances in which missing an assessment is unavoidable, and in which case special arrangements will be made to prevent you missing out on your opportunity to obtain a grade.

The official form that you must complete can be found on the following two pages.

REQUEST FOR MITIGATION FORM

To be used for examinations and major pieces of coursework and projects.

For consideration of mitigating circumstances for an assessment this form must be submitted within 5 working days of the examination or coursework submission date to the Field Leader for Global Challenges.

The College Health Centre can only certify illness for absence from College lasting more than one week or absence from an examination. They cannot certify an illness if a student has not been seen at the Health Centre during the illness. Likewise, the College Student Counselling Service can only provide a letter on request by a student who is already attending counselling. The College Disability Advisory Service can only help students to obtain appropriate evidence of disability prior to examinations taking place and are not able to certify for absences due to disability.

Personal Details

Name:	
CID:	
Department:	
Programme of Study:	
Year of Study:	
Nature of Mitigating Circumstances (Please tick appropriate box)	
Own illness	
Family illness/bereavement	
Accident	
Victim of crime	

Other unforeseen circumstances	
Please give details of the nature of your mitigating circumstances including dates:	
Documentation supplied	

Acceptable Supporting Documentation Includes:

- Medical Certificate or doctor's letter (if from a UK based practitioner, they should be GMC registered)
- Email/letter from Imperial College Health Centre
- Hospital Admission note
- Death Certificate
- Police Crime Number/report
- Letter from counsellor

Please note that the information on this form will remain confidential and will only be viewed by the Field Leader in the first instance. If there is a need to share the information with your department or with the Board of Examiners, you will be informed of this prior to sending the information. The Field Leader will be able to make a recommendation to the Board of Examiners regarding your circumstances.

I wish for the appropriate Board of Examiners to take into account my mitigating circumstances for the assessments listed above. I declare that the information I have given to be true to the best of my knowledge and understand that false claims for mitigation are a serious examinations offence.

Signed (student).....

Date:.....

Print Name.....

Signed (member of staff to confirm receipt).....

Date:.....

Print Name.....

Academic Integrity and Plagiarism

The concept of academic integrity is fundamental to your student experience at Imperial so as to ensure that your academic achievements are a true reflection of your abilities.

Academic integrity means conducting all aspects of your academic life in a professional manner. It includes:

- Taking full responsibility for your own work
- Following accepted conventions, rules and laws when presenting your own work
- Fully acknowledging the work of others wherever it has contributed to your own work, thus avoiding plagiarism
- Ensuring that your own work is reported honestly and that you follow the ethical conventions and requirements appropriate to your discipline
- Avoiding actions which are intended to give you an unfair advantage over others
- Respecting the rights of your fellow students, your teachers and other scholars
- Behaving with respect and courtesy when debating with others whether or not you agree with them
- Maintaining standards of conduct appropriate to a practitioner in your discipline
- Supporting others in their efforts to behave with academic integrity

You are reminded that all work submitted as part of the requirements for any examination and assessment (including coursework) must be expressed in your own words and incorporate your own ideas and judgements.

Plagiarism, which is the presentation of another person's thoughts, words or images and diagrams as though they were your own and which is a form of cheating, must be avoided, with particular care in coursework, essays, reports and projects. You are encouraged to read and criticise the work of others as much as possible, and you are expected to incorporate this into your thinking and in your coursework and assessments. But you must be sure to acknowledge and identify your sources.

Direct quotations from the published or unpublished work of others, whether from the internet or from any other source, must always be clearly identified as such by the use of quotation marks.

A full reference to their source must be provided in the proper form. Remember that a series of short quotations from several different sources, if not clearly identified as such, constitutes plagiarism just as much as a single unacknowledged long quotation from a single source. Equally, if you summarise another person's ideas or judgements, figures, diagrams or software, you must refer to that person in your text, and include the work referred to in your bibliography.

The direct and unacknowledged repetition of your own work which has already been submitted for assessment can constitute self-plagiarism.

Where group work is submitted, this should be presented and referenced, with individual contributions recorded.

The use of the work of another student, past or present, also constitutes plagiarism. Where work is used without the consent of that student, this will normally be regarded as a major offence of plagiarism.

Giving your work to another student to use (other than in a group assessment) may also constitute an offence.

The College may submit your work to an external plagiarism detection service, and by registering with the College you are automatically giving your consent for any of your work to be submitted to such a service.

The College will investigate all instances where an examination or assessment offence is reported and apply appropriate penalties to students who are found guilty. These penalties include a mark of zero for the assessment in which the examination offence occurred or a mark of zero for all the assessments in that year or exclusion from all future examinations of the University.

Finding out more

Further help with avoiding plagiarism and demonstrating good academic practice can be found in the [online library resource Olivia](#) and in the [Imperial Success Guide](#). Don't forget that your co-learners and module leader can also give you feedback and advice about this.