

Date	Session time	Option 1	Option 2
Tues 19 th Nov	09:00 – 12:00	<p>Welcome and introduction to new PhD students</p> <p>09:00 start for 1st years Including an introduction to Iapetus and talks from recent Iapetus graduates:</p> <ul style="list-style-type: none"> • Amy McCarron: Scientific Outreach & Impact Officer with Forth-ERA • Celleste Kellock: Senior Policy Analyst with Environmental Standards Scotland <p>10:30 start for 2nd years and above Including all-student networking</p> <p>Led by Phil Stephens (Durham University) and Heather Price (University of Stirling)</p>	
	12:00 – 14:00	<p>Lunch in the Stirling Court Hotel restaurant and free time</p> <p>Today over the lunch break we'll be joined by Verity Flower (University of Stirling) who will run a crafting session for those who would enjoy some crafting (room tbc).</p> <p>If crafting isn't your thing, other things you could do in this (and other) lunch breaks include:</p> <ul style="list-style-type: none"> • Walks around campus, the Wallace Monument or (part-way) up Dumyat • See if there is anything going on at the Macrobert Arts Centre • Find the University of Stirling's 'cultural gems' • Explore Bridge of Allan and get an ice cream from the Allanwater Cafe (closed Tuesday) 	
	14:00 – 17:00	<p>An introduction to R Most IAPETUS PhDs involve working with data, so you will probably need to develop skills in data manipulation, data visualisation and statistical analysis. You can get quite far with traditional 'click-and-point' software like SPSS or Minitab but learning to use open-source coding environments like R opens up huge potential for sophisticated analysis and makes your research more open and repeatable. The aim of this session is to introduce you to R coding with RStudio. First, we will cover installation of the software and basics of the</p>	<p>Bridging the gap: connecting research and policy This session will introduce the concept of academic policy engagement, highlighting how research and policymaking can be effectively integrated. Participants will learn accessible methods for researchers to engage with policy processes and explore the potential policy impact of their own research. Objectives:</p>

		<p>language. Then we will work through some examples of using R to handle data, produce graphs and carry out data analyses. Finally, I will introduce some more advanced uses of R that may become relevant for your future research, including using R as a GIS for spatial data, programming simulations and automating multiple tasks and parallel computing with R. No previous experience of R is required and hopefully this session will be of interest whatever your level of experience. Bring your laptop as you will be coding!</p> <p>Led by Dan Chapman (University of Stirling)</p>	<ol style="list-style-type: none"> 1. Understand Academic Policy Engagement: Define what academic policy engagement entails and why it is important. 2. Explore Methods of Engagement: Discuss various accessible ways for researchers to interact with policy processes. 3. Identify Policy Impact Opportunities: Reflect on your own research and identify potential areas for policy influence. <p>Led by Neil Heckels and Adam Holden (Durham University)</p>
Wed 20 th Nov	09:00 – 12:00	<p>Data visualisation</p> <p>Graphics play an integral role in statistical analysis and will be indispensable for communicating your results in your thesis and scientific papers, presentations and to wider non-scientific audiences. In this session I will introduce the use of the ggplot2 R library for producing a range of typical scientific graphs. Then we will discuss good and bad practice in scientific plotting and data visualisation. Finally, there will be a chance to explore some more advanced data visualisations using ggplot2.</p> <p>Led by Dan Chapman (University of Stirling)</p>	<p>Participatory Methods in Environmental Science</p> <p>Participatory approaches involve non-researchers contributing to, collaborating on and/or co-creating research and these methods can offer unique opportunities and insight. The aim of this session is to provide students with an introduction to a range of participatory methods available for data collection relevant to environmental science research and/or future non-academic careers, e.g., government. In doing so, we will draw on our own research experiences to provide examples of collecting data using a participatory approach, including walking interviews, photovoice and citizen juries. We will also provide students with time and space to explore the use of participatory methods in practice.</p> <p>Led by Tony Robertson, Heather Price and David Oliver (University of Stirling)</p>

	12:00 – 14:00	Lunch in the Stirling Court Hotel restaurant and free time	
	14:00 – 17:00	<p>What is a thesis? At the end of the day, a PhD is all about producing a thesis; but what is a thesis? What makes a good thesis and what leads to a strong outcome at the end of a PhD? This will be an interactive discussion in which we will talk about the ingredients and the recipe for producing a PhD thesis. Writing a PhD thesis isn't something you just do at the end of your studies; we will talk about strategies for working during years 1-3 to develop the portfolio of material that will help you assemble your thesis. We will discuss what your PhD thesis needs to do for you – how it helps you pass your viva and how it helps you launch your future career.</p> <p>Led by Matt Tinsley (University of Stirling)</p>	<p>Machine learning fundamentals: concepts and practice In this session we will cover the basic knowledge necessary for you to incorporate more 'traditional' machine learning into your research. We will discuss how prediction as a goal is better approached with a different mindset than hypothesis testing / exploratory analysis and understand the train - tune - test workflow for fitting ML models. We will then explore some ML algorithms and try our hands on a full ML workflow using R and the 'tidymodels' framework: https://www.tidymodels.org/. Anyone with a basic knowledge of statistics will be able to participate, but you will make the most out of the session if you have some R coding experience. Make sure you have R (https://www.r-project.org/) and RStudio (https://posit.co/download/rstudio-desktop/) installed if you wish to bring your own laptop. I also suggest reading the Introduction section of the free e-book 'Tidy Modeling with R' (https://www.tmwr.org/).</p> <p>Led by Thiago Silva (University of Stirling)</p>
Thurs 21 st Nov	09:00 – 12:00	<p>Fieldwork: inclusion and safety Fieldwork can be the best part of being a scientist! Fieldwork can be inspiring and memorable, both for its new positive experiences and challenges. This session is aimed at everyone who is involved/will be involved in fieldwork. This session will introduce you to planning and undertaking fieldwork. We will discuss practical tips for before, during and after your time in the field, to promote</p>	<p>Using Python to process remote sensing data In this hands-on practical you will explore the use of Python to process Remote Sensing images (e.g. satellite or drone data). Why Python? Because it will allow you to use fantastic libraries to manipulate data for regression and classification purposes. There are plenty of Python libraries to apply statistical techniques as well as Deep Learning AI methodologies. But</p>

	<p>a safe and inclusive fieldwork culture. The session is built upon advice from those who have been into the field themselves and learnt many things along the way.</p> <p>Led by Zarah Pattison and Alan Law (University of Stirling)</p>	<p>before you will be able to run a “Deep Learning marathon”, you will need to learn how to walk “an image exploration fun-run”.</p> <p>You will open remote sensing data and learn how to extract the information contained in each pixels. You will plot some histograms, create some indexes and learn how to apply for loop to multidimensional images.</p> <p>REQUIREMENTS: for a better use of your time, please bring a laptop with python 3.x (3.10 possibly) installed on it. Please use the Anaconda installer. Also please instal packages in advance as described in the attached document.</p> <p>Led by Armando Marino (University of Stirling)</p>
12:00 – 14:00	Lunch in the Stirling Court Hotel restaurant and free time	
14:00 – 17:00	<p>Non-academic careers showcase</p> <p>In this session, a variety of representatives of employers in the environmental sector – including public, private and charitable organisations – will discuss the work done by their organisations, and the opportunities available for doctoral graduates. There will then be a chance for one-to-one discussions with employers.</p> <p>Chaired by Phil Stephens (Durham University) and Heather Price (University of Stirling)</p>	