

## Twitter Careers Q&A - 2016



Our RMetS Careers Twitter Hour is taking place on Wednesday 2nd November between 12 and 2pm. Tweet us your questions using the hashtag, and our panel will help answer your questions, On this page you can find the extended answers and extra information. Or visit our twitter account [@RMetS](#) <sup>[1]</sup> and follow [#RMetSCareers](#) <sup>[2]</sup>

**Q: Is there a book that gives an introduction to weather that you recommend is a good read before starting a meteorology uni course?**

"Firstly contact the university department that you will be starting at and get their recommended reading list. You don't want to buy a similar book to a course text and then have to buy that as well. That being said I would recommend *Meteorology Today* by C. Donald Ahrens. This is a very expensive book so do not buy the latest version you should be able to find a second hand copy on-line, or in a campus bookshop." **Dr Alex Thomas, University of Edinburgh.**

"Barry and Chorley (2010 for 9th edition) *Atmosphere, weather and climate*. Routledge, London is a good one – pricey when new, but plenty of second-hand available" **Prof Tim Osborn, UEA**

"Introducing Meteorology by Jon Shonk, a past office mate of mine and includes a photo by yours truly! [www.amazon.co.uk/Introducing-Meteorology-Weather-Environmental-Sciences/dp/1780460023](http://www.amazon.co.uk/Introducing-Meteorology-Weather-Environmental-Sciences/dp/1780460023) <sup>[3]</sup>" **Dr Michelle Cain, University of Cambridge**

**Q: What A levels are the best combination to study environmental sciences at university?**

"Courses in "Environmental Sciences" vary a lot between universities each having its own specialisms. At Edinburgh for example we have two degrees: Ecology and Environmental Science; and Environmental Geoscience, which are quite different one being more focused on terrestrial ecology and the other on environmental chemistry, Earth surface processes and paleoclimate. The subject requirements for these type of degrees are likely to include Biology, Chemistry, Mathematics, Physics, Environmental Studies, Geography, Geology. Note though that some degree programs may have more specific requirements (for example to include Maths or Biology or Chemistry) but generally it is good to have a broad range of sciences. Additionally some Environmental science courses that are more focused on using the physical sciences to study the environment may not accept Environmental Studies as part of their

subject requirements for admissions." **Dr Alex Thomas, University of Edinburgh.**

**Q: How important is it that I have coding experience?**

"Before you start your degree – not at all, when you have finished it – highly desirable."  
**Dr Alex Thomas, University of Edinburgh.**

**Q. What exams should my child take if they want to be a meteorologist?**

"Maths and Physics are essential. Other sciences are useful but taking subjects that you are enthusiastic about is important too." **Dr Alex Thomas, University of Edinburgh.**

"To be a “mainstream” meteorologist I always suggest A level maths first, then physics. We use physics to describe atmospheric behaviour, then use our maths to represent the physics equations and solve them (possibly using computers). Maths is a key requirement for most meteorology degrees at uni. Of course, “meteorologist” covers a much wider range of careers now – see this profile [www.prospects.ac.uk/job-profiles/meteorologist](http://www.prospects.ac.uk/job-profiles/meteorologist) [4] - so there is opportunity for non-maths specialists too!" **Prof Tim Osborn, UEA**

**Q: I'm in the midst of my (climate physics) PhD but don't want to stay in academia. What are my options?**

"Ever widening range of organisations that need met, climate, etc. Private sector e.g. insurance for weather risk, engineering consultancies for climate change (@MottMacGraduate [5], @atkinsglobal [6]), farming and food industry, water resources companies. Climate change rather than climate physics per se is in demand by public sector e.g. for advice on climate change policy and NGOs e.g. conservation, wildlife, landscape organisations" **Prof Tim Osborn, UEA**

**Q: Really broad question but I'm unsure... what's actually involved with a PhD and what is it like?**

"Every PhD is different. Some contain labwork or field work to gather your data. In my case, my data was already 'collected' or sent automatically to me. Often you have to 'tidy' this data up, by removing errors or filling gaps. A lot of research is finding patterns, or investigating a pattern. Sometimes you need to develop a model or method, and this can take up a large portion of your phd. I had to develop an algorithm to find specific weather conditions from my data. Computer modelling is often involved, as with mine. I had to set up the best option for a model, and then simulate conditions. My work is mesoscale met, but many are large scale dynamics. I use calculations to understand the energy balance over a part of the Antarctic too. It can go broad in some places, but in the grand scheme of things, it can be quite niche and localised.

What is it like? Difficult to be brutally honest. To start off with it can be hard to see the end, or the deadline, which can make time management difficult. Towards the end, you need to be better at organisation. It can be hard to ask for help, especially to your supervisors, but they want to help you, and your phd is the time to learn. It can also be extremely exciting. You find something nobody else has, or your model works, or you make a link between things. Every

day is different, and you can chose what to work on. Mondays I often looked at my model output which had run over the weekend. Tuesday was data analysis. I left coding or calculations to mid week when my brain was more engaged. Reading and writing was nicer on a friday to lead you into the weekend. Now I am writing my thesis, so now each day is more similar. But now i chose to work from home, or the office, or a cafe. A phd gives you flexibility which other jobs might not. If you're considering it, give it some thought. It is rewarding and i wouldn't change it for the world, but on stressful days (or weeks), you forget this, and it can get on top of you. After (almost) completing mine, I know academia/research is the profession for me!" **Jenny Turton, BAS**

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**Source URL:** <http://accsys.rmets.org/our-activities/twitter-careers-session/twitter-careers-qa-2016>

#### **Links**

[1] <http://www.twitter.com/RMetS>

[2] <https://twitter.com/search?q=rmetscareers&src=typd>

[3] <https://www.amazon.co.uk/Introducing-Meteorology-Weather-Environmental-Sciences/dp/1780460023>

[4] <http://www.prospects.ac.uk/job-profiles/meteorologist>

[5]

[https://twitter.com/MottMacGraduate?ref\\_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor](https://twitter.com/MottMacGraduate?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor)

[6] <https://twitter.com/atkinglobal>