

Earth Sciences



NAME OF COURSE

BA in Geology (3 years) or MEarthSci (4 years)

ADMISSIONS TEST

Candidates applying in 2020, will not have to take an admissions test.

A-LEVELS REQUIRED

Maths, plus Chemistry or Physics

MINIMUM A-LEVEL GRADE REQUIREMENTS

A*AA/AAAA

COURSE DESCRIPTION

At Oxford, you can apply for either a 3 year BA in Geology or a 4 year MEarthSci (it is recommended to apply for the 4 year course and you can then switch to the 3 year course if you wish to). During first and second year, you study a large range of topics including Maths, Physics, Chemistry, Palaeobiology, Geology etc. and from third year, you study a combination of core and optional modules. There is a large practical component to the course (approximately 45% of teaching) comprising of labs and fieldwork. Earth Sciences is a really good option if you are broadly interested in the sciences or are passionate about environmental issues/geology. It has components of Maths, Physics, Chemistry, Biology, Geography and Geology so is quite a broad field of study in your first two years. If you are someone who enjoys practical work and working out in the field, it's definitely a course to consider.

STRUCTURE OF MODULES

1st year:

- **Five compulsory courses:** Planet Earth, Fundamentals of geology I, Fundamentals of geology II, Physics, chemistry and biology for Earth Sciences, Mathematics for materials and Earth Sciences
- **Fieldwork:** Pembroke field course (pre-session), Arran field course (introduction), Local field courses
- **Assessment:** First University Examinations: Theory and Practical

2nd year:

- **Five compulsory courses:** Earth deformation and materials, Palaeobiology, Petrology, Geochemistry and ocean chemistry, Mathematical and geophysical tools
- **Fieldwork:** Dorset field course, Assynt field course (mapping)
- **Assessment:** Part A1 Examinations: Theory and Practical

3rd year:

- **Combination of core and optional courses:** Natural resources, Sedimentary basins, The oceans, Climate, Seismology and earth structure/Vector calculus, Geodynamics and continental deformation, Volcanology, igneous processes and petrogenesis, Evolutionary turning points/Quantitative palaeobiology, Earth materials, rock deformation and metamorphism
- **Fieldwork:** South-east Spain field course, Independent field mapping project (conducted over summer break between Years 2 and 3)
- **Extended essay**
- **Assessment:** Part A2 Examinations: Theory

4th year:

- **Research options (choose 4):** Anatomy of a mountain belt, Planetary chemistry, Structure and dynamics of the Earth's mantle, Records of major environmental change in Earth's history, Palaeobiology, Environmental, rock and palaeomagnetism, Topics in oceanography, Topics in volcanology
- **Fieldwork:** optional field courses as announced each year
- **Independent work:** research project over 2.5 terms
- **Assessment:** Part B Examination: Theory, MEarthSci (Earth Sciences)

APPROXIMATE NO. OF CONTACT HOURS PER WEEK

Tutorials: 2 **Lectures:** 7-10 **Labs:** 2-3
Independent study expected: 15-20

TUTORIAL TESTIMONIAL

On top of lectures and practicals, you will have two tutorials a week, which are basically small classes with ~2-3 other students and a Professor. In your first year, you will have one maths tutorial a week, where you will have to complete a problem set each week. The second tutorial of the week will be held by your college tutor/department, and can be anything ranging from: presentations, answering questions on a scientific paper, problem sets. For your maths tutorials, it can take anywhere between 3-6 hours to work through a problem set (possibly more if it's especially tricky). Even if you aren't able to work through the whole set, tutors are more than happy to provide any guidance or explanations that aren't already covered during the tutorial.

PERSONAL STATEMENT TIPS

- Be clear in what you are trying to say. Don't use language you don't understand or talk about things you wouldn't want to be asked about in an interview.
- Try to demonstrate, not describe.
- Show your knowledge through understanding of concepts as opposed to listing lots of achievements.
- It's a PERSONAL statement so make sure it is personal to you. By the end, you want the reader to understand why you want to study your subject and why you should be given an interview.

INTERVIEW TIPS

As there is no admissions test, there is definitely more weight on the interviews. Some things to keep in mind during your interview are:

- Always draw diagrams for everything, even the smallest of things. Try to also draw graphs where possible as this can help you to what's going on in the question and how things are changing.
- It's perfectly fine to ask for clarification if you misheard or misunderstood a question. The interviewer isn't there to ask trick questions or to purposefully make you trip up so do ask questions when you're unsure. It's better to be stuck and ask for help than to waste time trying to answer the question when you know you don't know where to go next.
- Getting a question wrong isn't necessarily a bad thing, if anything making a mistake and then being given a hint to help you out actually works in your favour if you're able to use that hint to get to the right conclusion.
- General interview etiquette – have a smile on your face and be friendly and easy going. Bear in mind that the people who interview you are the same people who will go on to tutor you at university so more than just you being academically able, they also have to see that you'd learn well under them and can respond effectively to anything they say.

STUDYING

In the first year, you will have 2-3 labs a week and an average of 7-10 hours of lectures in the week, although this does vary throughout the year (Don't worry, things get better in 2nd year). Lectures make up most of your contact hours throughout the course. Maths and Physics revolve more around explaining a concept and then going through lots of examples, whereas modules like Planet Earth and Crystals and Minerals are a lot more content heavy. Labs can include a variety of things including: microscope practicals, mapping sessions, problem sheet sessions etc. (depends on what you're studying at the time). As long as you aim to get your tutorial work done in the week, you should be able to have a (semi) free weekend.

CAREER PROSPECTS

A large proportion of students who have studied Earth Sciences go on to work within energy industries, the environmental sector and engineering/technical consultancy and 40% of students go onto study further through a PhD or a further master's course. The Earth Sciences course provides analytical and problem-solving skills that are admirable in many different professions.

ONE THING I WISH I KNEW WHEN I WAS APPLYING

Anyone can get in, and they're just looking for the best academic potential and curiosity.

Recommended Reading/Viewing

As Earth Sciences is such a broad degree, there are a lot of options when it comes to what you can do for further research. A few general recommendations are:

- **How to build a habitable planet** by Wallace Smith Broecker - gives an overview of the history of the Earth, its formation and continued development. It provides a general understanding of the Earth and its processes without any need for prior knowledge.
- Any **David Attenborough documentary** is a good form of research. It might not all be relevant but they're really interesting anyway.
- If you haven't studied geography, **Plate Tectonics: A very short introduction** by Peter Molnar is a great resource to fill in any gaps.
- The YouTube channel **Mike Sammartano** has lots of videos covering all sorts of concepts you'll see in the course such as continental drift, plate tectonics, different types of rocks etc.