MSc Earth and Planetary Observation
The Space sector is growing fast, driven by rising demands of Earth observation and space exploration and the need for evidence-based solutions.

The rapidly increasing rate of data collection from Earth and space missions suitable for quantifying physical and biogeochemical processes on Earth and other planetary bodies (e.g. ESA Sentinel and Rosetta, NASA Mars Exploration Rovers and Landsat and Aqua missions) offers unique information about a wide range of different environments.

In parallel, advances in sensors and platforms (e.g. unmanned vehicles, CubeSats) support new and more detailed characterisation of surfaces and processes. Collectively, these are revealing a new era for science applications and industry opportunities.

WHY STUDY AN MSc EARTH AND PLANETARY OBSERVATION?

ABOUT THE COURSE

This is the only MSc in the UK to combine Earth observation and space exploration. The course is a response to the growing investment in the space sector, and the increasing need by industry for trained individuals to exploit remote sensing tools.

Our course is highly relevant to the recruitment needs of employers and offers a range of career opportunities in the space sector with unique focus on environmental, heritage and resource management sectors.

This course provides a thorough scientific grounding in remote sensing and professional training in geospatial technology and programming, with a unique focus on environmental applications and space exploration.

We’ll cover satellite, space, (un)manned airborne and remote sensing to give a core professional and academic training in GIS, data analytics, modelling and theoretical, field and lab skills.
COURSE STRUCTURE AND CONTENT

The first semester will develop core theoretical, field and data analytics skills alongside learning about environmental processes. In the second semester, the focus turns to training advanced skills in optical and passive remote sensing through a wide range of applications. This includes topics such as:

- aquatic and terrestrial systems
- cometary and planetary near-surface processes
- icebergs
- ecology
- marine safety
- food security
- human health
- climate change.

You’ll also take a specialist module on GIS for learning geo-informatics skills required in the sector.

Compulsory course modules
- Fundamentals of Remote Sensing
- Representing and Manipulating Data
- Applications in Earth Observation
- Geomatics
- Planetary Exploration
- Dissertation

Elective course modules
- Field Techniques
- Commercial and Scientific Applications
Five Reasons

Why You Should Choose This Course

1. This is the only MSc in the UK to combine Earth observation and space exploration.

2. The course provides a thorough scientific grounding in remote sensing and professional training in geospatial technology and programming.

3. Our course meets the recruitment needs of employers and provides diverse career opportunities across different space sectors.

4. Our course is based on research-led teaching, delivered by staff who are world-leaders in their fields.

5. The course combines interdisciplinary scientific knowledge in environmental sciences with practical and cutting edge observation technology.
ENTRY REQUIREMENTS

A minimum of a second class honours degree or equivalent in a numerate subject such as geosciences, geography, environmental sciences, physics, engineering, mathematics is required for entry to this course. Applicants without these formal qualifications, but with significant appropriate work, may also be considered.

ENGLISH REQUIREMENTS

If English is not your first language you must have the following qualification as evidence of your English language skills: IELTS: 6.0 with 5.5 minimum in each skill.

If you don’t meet the required score you may be able to register for one of our pre-sessional English courses.

CAREER OPPORTUNITIES

The MSc in Earth and Planetary Observation aims to prepare graduates for a successful career in:

• environmental, heritage and resource management (e.g. agriculture, fisheries, energy, insurances, waste crime) sectors

• the fast-growing downstream space and technology-driven industries, including government regulators, local authorities, universities and space agencies

FOR MORE INFO ABOUT SCHOLARSHIPS AND FUNDING VISIT: stir.ac.uk/1j5

CONTACT INFORMATION

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Photography: For a list of photographers who have contributed to the University of Stirling photo library, contact: marketingtools@stir.ac.uk

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