STUDY ENVIRONMENTAL PHYSICS OR METEOROLOGY AT READING

Forecast for the future
OUR PLANET YOUR FUTURE

• So, what do you do for a living?

• What do you predict?
GRAND CHALLENGES

Flooding | Aerosols | Tropical Cyclones

Space Weather | African Rainfall | Oceans & Climate
DEGREES IN METEOROLOGY AND ENVIRONMENTAL PHYSICS

• We offer the following undergraduate courses:
  • BSc Meteorology and Climate (BB physics and maths)
  • MMet Meteorology and Climate with a year in Oklahoma (AA physics and maths)
  • BSc Mathematics and Meteorology
  • MMath Mathematics and Meteorology
  Environmental Physics BSc (ABB from three A levels including Mathematics and Physics, one of which must be at a grade A)

• More information at www.met.rdg.ac.uk/ug/ugcourses.html
ENVIRONMENTAL PHYSICS AND METEOROLOGY AT READING

The Meteorology Department is at the forefront of Weather, Climate and Space research, with strong links throughout the industry.

We run courses with small student numbers.

Our courses cover all aspects of Weather, Climate and Space science and include a wide range of practical activities.

Our graduates go onto a wide range of scientific careers.
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<td>Physics of the Natural World</td>
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Skills for Graduates

 Maths
 Physics
 Env Phys
 Env Lab
 General
# ENVIRONMENTAL PHYSICS

## OPTIONAL MODULES

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<td><strong>Atmospheric Science Field Course</strong></td>
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*Limitless Potential | Limitless Opportunities | Limitless Impact*
FUNDAMENTAL PHYSICS: ELECTROMAGNETISM
FUNDAMENTAL PHYSICS: FLUID DYNAMICS
**METEOROLOGY MODULES**

**Year One**
- Introduction to Meteorology
- Weather and Climate fundamentals
- Skills for environmental science
- Calculus
- Linear Algebra

**Year Two**
- Atmosphere & Ocean Dynamics
- Atmospheric physics
- Numerical methods for environmental science
- Surface energy exchange
- Atmospheric analogues
- Skills for graduates
- Ordinary and Partial differential equations

**Year Three**
- Part 3 project
- Boundary layer meteorology
- General Studies

**Maths**
**Physics**
**Env Phys**
**Env Lab**
**General**
METEOROLOGY OPTIONAL MODULES

Year One
• Physics of natural world
• Environmental issues
  • Atomic/nuclear physics
  • Global environmental chemistry

Year Two
• Global quaternary climate change
• Weather forecasting: practice and presentation
  • Institution wide language programme
  • Statistics for weather & climate
  • Atmospheric Chemistry and Transport

Year Three
• Remote sensing methods and applications
• Climate change
• Dynamics of weather systems
• Oceanography
• Atmospheric field course (Arran)
• Numerical weather prediction
• Global circulation
• Atmospheric electricity
METEOROLOGY AND CLIMATE: MEASURE, EXPERIMENT, SIMULATE

- Plenty of hands-on experience
- Wide variety of skills
- Close-knit group
- Good career prospects
METEOROLOGY DEPARTMENT

We teach the next generation of weather, climate and space scientists and forecasters

Teaching staff: 45
Research staff: 180
Research students: 80
Undergraduate students: 70
METEOROLOGY DEPARTMENT

Small student numbers means we have a very high staff/student ratio of about 1:2

This means we know our students very well

Each member of teaching staff has 2-3 tutees

In some optional modules you will be taught in groups of 5-10.

These numbers are unmatched pretty well anywhere else in the UK for pretty much any subject
NATIONAL STUDENT SURVEY

100% overall student satisfaction
100% agreed 'Staff are good at explaining things'
100% agreed 'Staff are enthusiastic about what they are teaching'
100% agreed 'The course is intellectually stimulating'
100% agreed 'The course has helped me to present myself with confidence'
CAREERS

• Forecasting
  With organisations around the world including the UK Met Office and a range of private forecasting companies.

• Research in Weather, Climate and Environmental Science
  At universities and government research centres around the world.

• Consultancy
  For industries in the UK and overseas whose business is affected by weather, climate factors and other environmental factors
SPOTTING A THEME?

International Opportunities

Governments and Industry Partnerships

Global Scale Cooperation

World Meteorological Organisation
FORECASTING

• Met Office is the main employer of forecasters
• Other organisations in the UK and abroad that employ forecasters
• BBC, ITV employ national & regional forecasters and programme researchers

Tomasz Schafernaker
Laura Tobin
RESEARCH AND ACADEMIA

• Department of Meteorology at Reading is one of the leading centres for weather, space weather and climate.
• New multimillion funded Institute for Environmental Analytics hosted at Reading
• Researchers are part of international teams.
• (Un)usual places:
  • Active volcanoes - sample dust
  • Arctic - sea ice formation and destruction
  • Deserts - dust storms
  • Storm clouds - fly research aircrafts
  • Tropics - cyclones and typhoons
NOT TO MENTION....

Conferences worldwide
CONSULTANCY

- **Aviation** – RAF and civil
- **Shipping** – RN and commercial vessels
- **Energy providers/traders**
- **Investment Bankers**
- **Insurance companies** and re-insurers
- **Government:**
  - *Health protection (heat waves and cold snaps)*
  - *Highways Agency/Local Authorities (gritting)*
  - *Environment Agency*
  - *Flood defence/prediction (Rivers & coastal*
- **Agriculture** – crop spraying, harvesting
- **The Emergency Services**
- **Leisure organisations** – sports events
ACTUAL CAREERS

• TV Forcasters:
  • Laura Tobin  ITV Good Morning
  • Tomas Schafernacker  BBC Main News
  • Jay Wynne  BBC Main News
  • Holly Green  BBC South
  • Sean Batty  ITV Scotland
  • Simon King  Radio 5 Live
MORE CAREERS

• Meteorologist for Swedish Olympic Sailing Team
• Senior Scientist, National Centre for Atmospheric Research, Boulder Colorado
• Manager New Zealand Weather Service
• Weather Producer Sky TV
• Data Manager, British Antarctic Survey
• Head of Forecast Office, Heathrow
• Senior Analyst, Vattenfall Wind Energy, London
• Meteorologist EDF Trading, London
• Meteorologist Officer, Royal Navy
• Head of Catastrophe Research, Hiscox Insurance, London
• Chief Meteorologist, Northern Territory, Darwin, Australia
EMPLOYMENT RATES

85%

Is the employment rate for people with a degree in Meteorology. This is extremely high, with around 85% of graduates finding employment in a related career.
• 19,000 full and part-time students
• 20% International Students from over 150 countries.
• Over 4,000 staff across all departments
• Around 250 different subjects and combinations of subjects ranging from Sciences, Arts, Humanities
• Science subjects popular e.g. biological sciences, chemistry, food science, microbiology, electronic engineering, meteorology, cybernetics
• Masters and PhD programmes
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Placement year

• Open to All students
• Earn from £15,000 to £26,000
• Improves motivation to study and academic performance
• Develops technical & non technical skills graduate employers require
• Secure graduate job earlier with higher starting salary.
• Think of it as your 1st graduate job

Also offer summer placements
e.g., Space Internship Network (SpIN)
ACADEMIC/INDUSTRIAL PLACEMENTS

Dedicated, in-house placements officer

This year, three summer placements:
• Civil aviation authority
• Dept of Meteorology (through Royal Astro Soc)
• UK Met Office

Previous years:
• Huge range of transport, power, health, insurance, forecasting, instrumentation, etc. companies
• Both private and public sector
CAREER PROSPECTS

Graduates will gain excellent analytical, technical, and personal skills

- Governmental institutions (e.g., British Antarctic Survey, British Geological Survey, Centre for Ecology and Hydrology, Environment Agency, Met Office)

- Environmental and space research and consultancy

- Industry (aviation, transport, energy)

- Other general applications of physics and maths, (e.g., teaching, the scientific civil service, media, emergency services)

- Numerate professions (finance, risk management, insurance, etc).
LATEST EMPLOYMENT DATA

2014 graduation group, 6 months on

Full time work 70%
Further study 27%
“Other” 3%
Unemployed 0%

These figures are fairly typical of our student destinations over the past 3 years