University of Reading

Meteorology

Collecting policy

User profile

This collection statement covers provision for the Department of Meteorology in the School of Mathematics and Physical Sciences. The collections serve all staff and students in the department.

Research interests

In the Research Excellence Framework (REF) results for 2014, 86% of research was graded as world leading or internationally excellent.

There are three overlapping themes:

- Weather, which includes research in mesoscale and dynamical processes, boundary-layer and urban meteorology, radar meteorology, cloud physics and African meteorology.
- Climate, which includes research in climate variability and change, radiative transfer, aerosol-climate interactions, oceanography, atmospheric electricity, tropical climate, land-surface processes and stratospheric dynamics.
- Earth observation and space, which includes research in high-resolution atmospheric data assimilation, data assimilation theory, space weather, land-surface remote sensing, cloud and precipitation remote sensing; and, remote sensing and modelling of volcanoes.

The department is still growing, with 15 new members of staff recently appointed as part of the University's Academic Investment Project.

Dimensions of Teaching and Learning

In 2014, Meteorology consisted of 59 undergraduate (BSc) students, 40 taught postgraduate (MSc) students and 87 doctoral (PhD) students. The last figure is a significant increase since 2012.

The department offers a range of Meteorology 3 and 4 year degrees and joint degrees, and from 2014 a degree in Environmental physics - see http://www.met.reading.ac.uk/ug/ for more information. Some courses are offered with the option of a year out in industry.

There are four MSc courses: Atmosphere, ocean and climate; Applied meteorology; Data assimilation and inverse methods in geoscience; and Applied meteorology and climate with management (the management modules being provided by the Henley Business School at the University of Reading). Data assimilation and inverse methods in geoscience is offered jointly with the Mathematics Department.

There are no distance courses offered, but there is an option to do the MSc courses, apart from the Applied meteorology and climate with management MSc, part time over two years.

Current holdings

Most materials fall into the 550 (Earth sciences) section of the classification, but additional material is found at 518 (Numerical analysis), 526.982 (Aerial surveying), 530 (Physics including Fluid mechanics and Geomagnetism), and 628.5 (Environmental chemistry). For more detail see the Meteorology LibGuide - http://libguides.reading.ac.uk/meteorology.

The collection has recently undergone an extensive review process to withdraw older and less well used titles. Older books and pre 1990 journals have either been disposed of or relegated to an off-site store to keep the collection current and to create extra space for new materials as part of a Library wide collections project.

Books and e-books

The sections relevant to meteorology are continuing to expand although a significant proportion of material is now being purchased as e-books, both textbooks and research level books.

Periodicals and e-journals

The School currently subscribes to a number of single periodical titles and packages. Some are directly relevant for Meteorology, but many of the other titles such as *Geophysical Research Letters* and *Annual Review of Fluid Mechanics*, are also used by members of both Meteorology and Mathematics.

Very few of the current titles are 'shared' acquisitions with other University Schools and Departments. Some periodical subscriptions are partly or wholly paid for by the Meteorology Department rather than from Library funds.

The majority of meteorology-related journals are electronic and are available via the Enterprise catalogue, Summon and the E-journals Finder. These may be provided as subscriptions to individual titles, bundles or publisher packages. For example, ScienceDirect offers full text articles from 1995, including journals on environmental science generally and more specific meteorology titles eg *Atmospheric Research*.

Reference materials - print and electronic (inc bibliographic databases)

There is a wide range of meteorology-related titles in the Library's reference collection. These include major encyclopaedias, dictionaries and glossaries. Some reference titles are available online eg. *A Dictionary of Climate Change and the Environment*.

There is no specific meteorological database, but Web of Science is used extensively. In addition, the Library subscribes to:

- GEOBASE, which covers climatology and meteorology; ecology; environment; geology (geochemistry and geophysics); hydrology; oceanography and volcanology.
- GREENFile, which is an interdisciplinary database, covering all aspects of human impact to the environment. Topics covered include global climate change and pollution.

Students are encouraged to make use of the Science Citation Index available via the ISI Web of Science.

Maps

The Map collection is used by students and staff, including paper maps and online resources eg. Digimap. For further details see the Geography and Environmental Science collecting policy.

Strengths, exclusions, and areas for development

The University Library collection is strong and up-to-date in undergraduate texts (comparatively few titles are recommended reading). Research interests are served largely through periodicals.

There is a good scientific collection supporting climate change.

Charts and historical/rare books are not collected.

Areas for development currently include books on research methods in climate science; scientific writing and project management; statistics and statistical physics; environmental physics and chemistry; data assimilation; cross-disciplinary texts in weather, climate and geoscience; and solar and solar-terrestrial physics.

Collecting level

There is a broad coverage of research issues, with good periodical and e-journal coverage. The book collection is less specialised, focusing more on support for undergraduate and taught postgraduate courses.

Reference materials: provision is reasonable and is maintained as necessary.

Alternative access

Inter-library loans

Staff and undergraduates working on projects, find much of the material they need in the Library but are also supported by inter-library loans.

Other information resources in the University

The departmental library maintains a collection of books on meteorology, climatology, fluid dynamics, hydrology, oceanography, maths, physics and scientific writing. It has a small, but expanding section of solar and solar-terrestrial physics texts. It also stocks a few print journals, CD ROMS, newsletters, reports and preprints. All of the department's PhD theses and MSc dissertations from 1966 onwards are housed in the departmental library and from 2015, all PhD theses have been scanned and are available through the British Library's EThOS programme.

The departmental library is a local reference and lending resource for all staff and students in the department. The main focus for new purchases is postgraduate level books and recommended texts for undergraduate and taught postgraduate courses. The periodicals include frequently used titles covering undergraduate and postgraduate needs that are unique to the needs of the department.

Generally the departmental library does not duplicate periodicals held in the Library, but some are held where print holdings are longer term than the Library. There is an overlap of well-used books.

Use of other libraries

As the national, specialist library in the meteorological sciences, the Met Office Library can be consulted by staff and students. The Bodleian Library, Oxford, is relevant for rare and historical publications.

The European Centre for Medium-Range Weather Forecasts (ECMWF) is an international organisation supported by 34 States and based in Reading. Staff use its library in the course of their work with the organisation; as is also the case with the Southampton Oceanography Centre, although the resources held at both may often be found in the University, the Departmental or the Met Office libraries.

Student membership can be gained at the Royal Meteorological Society.

A number of staff have personal subscriptions to journals, enabling them to access e-journals and packages not available via the University Library.

Selection, acquisition and stock editing

See the General Collection Development Statement for general principles.

E-books are purchased wherever possible, availability and cost permitting. Textbooks, particularly those on reading lists, are also purchased in print where funds allow.

Research level materials may be acquired in languages other than English, but the emphasis is on English material.

Use is made of the Course Collection for access to items in heavy demand.

The purchasing priorities of the department are to ensure that there are subscriptions to essential periodicals and that there are adequate numbers of text books to support taught courses.

Where possible, little used secondary material in foreign languages as well as non-academic titles will be withdrawn when space pressures require it. Duplicates which are little used, as well as superseded editions, will usually be withdrawn, though it is sometimes the case that an older edition is kept in multiple copies to satisfy peak demand.

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Policy written by Judith Fox, Meteorology Liaison Librarian, September 2015.