

Iowa State University Library
Geology and Atmospheric Sciences Collection Development Policy

I. General Purpose

The goal of purchasing in this subject area is to support the research needs of faculty and students in geology and meteorology. Geology is generally defined as the study of the earth. At ISU, this includes: hydrogeology, environmental geology, geochemistry, petrology, mineralogy, structural geology/tectonics, stratigraphy/sedimentation, economic geology, and earth science education. The study of meteorology involves the description of the earth's atmosphere and the processes responsible for its behavior. Also, contemporary meteorology is an earth-system science with ties to a variety of human experiences. None of these subject areas are highly-ranked in importance at ISU and are competing with much more prominent programs at the University of Iowa.

II. History

Physical Geography was first taught in 1869. From 1884 to 1898, geology courses were taught by the Department of Zoology, Entomology and Geology. The Department of Geology was established in 1898 and it was then coupled with the Department of Mining Engineering until 1920 when it was administered by its own head. In 1910, the Department first offered graduate work leading to the Master of Science degree. In 1915, work leading to the Doctor of Philosophy degrees was added, but it was eliminated in 1933. In 1954, doctoral work was offered as a divided major. On July 1, 1965, the name of the Department was changed to the Department of Earth Science. In 1967, the Department reopened major work leading to the Doctor of Philosophy and cooperated in interdepartmental program leading to the M.S. and Ph.D. in Water Resources. In 1969, the Department expanded to include earth science, geology and meteorology. The name of the Department was changed in 1989 to the Department of Geological and Atmospheric Sciences. The Department is responsible for the Electron Microprobe Facility.

III. Iowa State University Program

The Department of Geological and Atmospheric Sciences offers courses in Geology and Meteorology. Undergraduate majors can be earned in earth science (B.A., B.S.), geology (B.S.), and meteorology (B.S.). The Geology Program offers M.S. and Ph.D. degrees in geology and earth science with specializations in hydrogeology, environmental geology, geochemistry, petrology, mineralogy, structural geology/tectonics, stratigraphy/sedimentation, economic geology, and earth science education. The Geological Sciences Program participates in interdisciplinary water resources and mineral resources programs and in the Center for Coal and the Environment program. A double major in geology and water resources is available to students who are studying some aspect of hydrogeology and/or aqueous geochemistry.

The Meteorology Program offers M.S. and Ph.D. degrees in Meteorology. The Department also offers minors in Geology and Meteorology. The Meteorology Program is closely tied to the Agricultural Meteorology Program in the Department of Agronomy and the Atmospheric Physics Group in the Department of Physics and Astronomy.

ISU has a special arrangement with the University of Southern Mississippi, Gulf Coast Research Laboratory, to allow ISU students to take courses on oceanography and marine geology. These courses can then be transferred to the ISU degree programs.

IV. Subject Boundaries

Paleontology and mineralogy are not collected except at a very introductory level. In addition, very little material is purchased dealing with oceanography, marine geology, or earthquakes. Materials related to climate change are generally collected by the Environment Bibliographer. Extra efforts are made to purchase introductory level books dealing with weather hazards common to this region, such as tornadoes, thunderstorms, floods, etc.

V. General Collection Guidelines

A. Linguistic.

English is the primary language of new acquisitions. Other languages are usually only collected as part of exchange programs with geological surveys in other countries. Due to the regional nature of the earth sciences, material on the geology of a region will be purchased in whatever language is available.

B. Geographical Areas.

The Geological Sciences Program offers an annual field camp opportunity which focuses on the Big Horn Basin, Big Horn Mountains, and Shell Canyon in northwest Wyoming. In addition, several geographic areas are emphasized due to particular past and/or on-going research interests. These areas are:

C. Types of Materials Collected.

Publications of national and state geological surveys and societies, field-trip guidebooks and serials are emphasized. Publications from state geological surveys are automatically added to the collection if they are available free of charge. "Some" efforts are made to purchase materials from neighboring state geological surveys as well as field-trip guidebooks related to Iowa or Midwestern geology. Field trip guidebooks are unique to the geosciences. They are often produced in small press runs and are difficult to obtain after the trips. Geological theses and dissertations are heavily cited. They are often focused on a specific region and may be the only existing information on a particular geographic area.

D. Format of Materials Collected

Materials in any format except flat maps are included in the General Collection. Maps that do not have accompanying text, and are published as flat maps, are in the Map Room. See the Geography Collection Development Policy.

The only geological survey open-file reports collected at ISU are those published by the Iowa Geological Survey and the U.S.G.S. There are a few from Ontario available in the microfiche collection, but these are an historical oddity and not actively collected. U.S.G.S. open-file reports are also available in the Microforms Collection.

In general, microform materials are not collected for geology. Research materials need to be portable for field trip usage & this format is not conducive to field conditions. However, some materials published as part of the U.S. Federal Depository Program are issued only in microfiche and, as such, are added to the collection regardless of format.

VI. Specific Collection Guidelines

VII. Detailed Subject Areas

The Meteorology Program currently focuses on agricultural meteorology, mesoscale processes, environmental and global change modelling, atmospheric and ozone dynamics, and the middle atmosphere.

The Geological Sciences Program focuses on hydrogeology, aqueous geochemistry, water resources, and environmental geology.

VIII. Other Resources Available

The Iowa Geological Survey is based out of the University of Iowa. In-depth geological resources not owned at ISU are frequently available at the University of Iowa or the U.S.G.S. Library. The Linda Hall Library in Kansas City, Missouri is a major source for materials which cannot be located elsewhere.

There is currently a web page to assist in locating "Geology Resources on the Web" at: <http://www.lib.iastate.edu/scholar/bib/geology.html>

IX. Cross-references to Collection Policies

Geography collection policy and the Map Library are obviously of great importance to the Geology program. In addition, the Physics policy covers some geophysics and atmospheric physics areas. Water resources materials are covered by a broad spectrum of other policies.

X. Creation date: 9/28/99

XI. Revision History

XII. LC Class(es), if applicable.

GB	Physical Geography
GB 1001-GB 1197.7	Hydrogeology
GC	Oceanography
QC 801-809	Geophysics
QC 851-999	Meteorology and Climatology
QE 1-899.2	Geology
TN 260-271	Mineralogy
TN 400-495	Ore deposits and mining of metals
TN 885-997	Non-metallic metals

XIII. Bibliographer name: Lorrie Knox