Earth Sciences
Collections Management Policy

Date created: March 2010

Subject librarian: Dan Sich

Purpose of the Collection

The earth sciences collection supports the research and teaching needs of the Department of Earth Sciences. The collection also reflects and bridges into multidisciplinary areas collaborating with the Department of Earth Sciences.

Scope of Coverage

1) LANGUAGE: English is the primary language of collection in physics and astronomy with other languages being considered upon request.

2) GEOGRAPHY: sources of publication are primarily Canada, the United States, Australia and Europe with the language restriction applied. Other regions are considered upon request and dependent upon funding availability.

3) CHRONOLOGY: Materials with a recent imprint date are preferred. Collection of older materials will be considered upon request but will be dependent upon funds as well as availability.

Type of Material Collected

In general acquisitions will include monographs, book series and journals. All theses and dissertations affiliated with the Department are also collected. Alternate formats such as CD-ROM, video, DVD, and microform are considered on an individual request basis. The focus of collecting is now shifting to resources available online and these are preferentially selected over their print counterparts especially in serials.

Exclusions

With the exception of individual requests and some selective acquisitions the following items are not actively pursued:

- popular literature
- conference and symposium proceedings,
- theses or dissertations from other institutions
- course textbooks.

Material Transfer to Long Term Storage:
Periodically it becomes necessary to analyze space availability in order to accommodate the growing collection. At these times, titles will be identified that can be transferred to our long term storage facilities. Criteria for transfer selection include but are not limited to the following:

1) Outdated or previous editions of titles
2) Medium to low use items
3) Material that is available in alternate formats, i.e. online
4) Materials that would benefit from storage in a more controlled environment.

**Earth Sciences Research Support**

The library supports research by collecting at a Research Level in areas of active research. Research Level is not the Comprehensive Level where all related materials worldwide are collected. Research Level can be defined as an extensive collection of general and specialized periodicals, monographs, bibliographic databases and reference works. Areas of research interest supported by the collection are given below.

**Research**

**Earth Sciences**
- Earth Materials
- Economic Geology
- Environmental Geology
- Geobiology
- Geochemistry
- Geodynamics
- Geophysics
- Hydrogeology
- Planetary Science
- Quaternary Geology
- Sedimentology
- Seismology
- Volcanology

**Instructional Support**

**Graduate Programs**

Graduate degrees are offered at the Master of Science and Ph.D. levels. Supervisors are assigned at the point of admission because of the associated financial support. Areas of research specialization are within the areas mentioned above.
Collecting is done at the Research Level for these areas of strong research specialties. Collecting is done at the advanced level of the Study or Instructional Support category with systematic attention to the courses listed in the academic calendar which include:

**Geology**
- Stable Isotope Crystal Chemistry of Hydrous Minerals
- Isotope Geochemistry in Earth & Environmental Sciences
- Analytical Geochemistry, Methods and Interpretation
- Planetary Science Seminar
- Advanced Mineralogy and Crystallography
- Applied Ground Water Modelling
- Advanced Sedimentary Petrology
- Special Topics in Stable Isotope Studies
- Ancient Ecosystems
- Historical Foundations of Stratigraphy
- Fundamentals of Ground Water Flow & Contaminant Transport
- Water in the Solar System
- Special Topics in Mineralogy
- Mineral Deposits and Evolution of Crustal Environments
- Regional Metallogeny
- Geology of Mars
- Flow of Rocks in Crust and Mantle
- Advanced Stable Isotope Science, Low Temp Systems
- Impact Cratering: Processes & Products
- Isotopic Dating of Planetary and Resource Evolution
- Improving Research Skills in Earth Sciences
- Basin Analysis
- Applied Concepts in Petroleum Geology
- Regional Petroleum Systems Seminar
- Advanced Glacial Geology
- M.Sc. Graduate Seminar
- International Field Course
- Ph.D. Graduate Seminar

**Geophysics**
- Time Series Analysis and Digital Signal Processing
- Geophysical Forward and Inverse Modeling
- Exploration Geophysics
- Aspects of High Pressure Geophysics
- Engineering Seismology
- Geophysics Field School
- Global Seismology
- Geodesy and Remote Sensing
- The Physics of Earthquakes
- Tools for Spectroscopic Study of Minerals
Undergraduate Programs

The Department offers a variety of programs leading to undergraduate degrees with specializations in Geology, Geophysics and Environmental Geoscience, and a Major in Earth and Planetary Sciences. Minors are available in Geophysics, Advanced Studies in Earth and Planetary Sciences, and Earth and Planetary Science.

Physics courses are fundamental for many science and applied sciences students across the campus. Collecting is done at the Study or Instructional Support Level with attention to the courses listed in the academic calendar which include:

Earth Sciences
- Earth Rocks!
- Planet Earth: Shaken and Stirred
- Resources, Environment and Sustainability in a Material Society
- Life on Planet Earth
- Origin and Geology of the Solar System
- Foundation for Medical and Forensic Geology
- Earth, Art and Culture
- The Dynamic Earth
- Plate Tectonic Theory, Environments, and Products
- Introduction to Structural Geology
- Mineral Systems, Crystallography and Optics
- Environmental and Exploration Geophysics I & II
- Data Analysis & Signal Processing in the Sciences
- Introduction to Geochemistry
- Catastrophic Events in Earth History
- Hazardous Earth
- Introductory Field Mapping Techniques
- Stratigraphy and Sedimentology: From Beds to Basins
- Paleobiology and Paleoecology
- Evolution of the Vertebrates
- Geology for Engineers
- Structure and Chemistry of Minerals and Materials
• Igneous Petrology
• Sedimentary Petrology
• Physics of the Earth I & II
• Introduction to Geodesy and Remote Sensing
• Watershed Hydrology
• Waters and Geochemical Cycles
• Advanced Field Mapping Techniques
• Geomicrobiology
• Metallogeny I: Ore Petrology
• Metallogeny II: Ore Deposit Models
• Earth Evolution
• Geophysical Forward and Inverse Modeling Methods
• Applied Seismology
• Advanced Mineral Physics
• Isotope Geochemistry in Earth and Environmental Science
• Fundamentals of Ground Water Flow and Contaminant Transport
• Regional Field Geology
• Sedimentology of Clastic and Carbonate Rocks
• Advanced Paleontology
• Glacial and Quaternary Geology
• Global Metallogenic Cycles in Crustal Evolution
• Petroleum Geology
• Senior Thesis

Expository works are collected which help make the transition from the theoretical and background information to the applications and potential applications found in the workplaces of the graduates.

**Support from Other Collections**

The collection for physics and astronomy is further supplemented by collection activities in related fields such as applied mathematics, biology, chemistry, computer science, earth sciences, engineering, medical biophysics, planetary science and statistics.

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