

# University of Waterloo Library

The accompanying Collection Development Policy statement is submitted by Dan Sich, Liaison Librarian for the Department of Physics and is approved by the undersigned.

---

Associate University Librarian,  
Information Resources & Services

---

Department Chair

---

Liaison Librarian

---

Department of Physics  
Representative

Date: March 19, 2006



## University of Waterloo Library

### Collection Development Policy statement for Physics.

Date Completed: March 19, 2007

#### Persons Responsible for Collection

The decision to select library materials is the responsibility of the Liaison Librarian, Dan Sich, in consultation with the Faculty Library Representative for Physics. See <http://www.lib.uwaterloo.ca/facultyinfo/index.html> for a list of Faculty Library Representatives.

#### Department Description and Purpose

Materials are collected to support teaching and research to the PhD level in Physics. Research Groups in this Department influencing current collecting include:

Astrophysics & Gravitation  
Atomic, Molecular and Optical  
Biophysics  
Condensed Matter Physics  
Optics  
Laser Science and Technology  
Quantum Computing

#### Scope of Coverage

##### Languages

For core materials, the emphasis is on English. Materials in other languages are collected if relevant.

##### Dates of Publication

Emphasis is on current publications.

#### Types and Formats of Materials Collected

*In general, the Library does not acquire materials in a format for which access cannot be provided in the Library.*

##### Included

The following types of materials are generally included: books, textbooks, and periodicals in print or electronic format as appropriate.

##### Collected Selectively

The following types of materials are collected selectively: reference works, conference proceedings, symposia, dissertations and theses.

### Excluded

The following types of materials are excluded: reprints.

### Subjects Collected

(For further explanation about Basic, Instructional and Research collecting levels see Appendix 1)

The following utilizes *Section A: Physics of the INSPEC Classification*.

A00 General (checked by Bae-Yeun Ha – done)	
A02 Mathematical methods in physics	Instructional
A03 Classical and quantum physics; mechanics and fields	Instructional
A04 Relativity and gravitation	Research
A05 Statistical physics and thermodynamics	Instructional
A07 Specific instrumentation and techniques of general use in physics	Instructional
A10 The Physics of Elementary Particles and Fields	
A11 General theory of fields and particles	Research
A12 Specific theories and interaction models; particle systematics	Instructional
A13 Specific reactions and phenomenology	Instructional
A14 Properties of specific particles and resonances	Instructional
A30 Atomic and Molecular Physics	
A31 Theory of atoms and molecules	Basic
A32 Atomic spectra and interactions with photons	Basic
A33 Molecular spectra and interactions with photons	Research
A34 Atomic and molecular collision processes and interactions	Instructional
A35 Properties of atoms and molecules: instruments and techniques	Research
A36 Studies of special atoms and molecules	Research
A40 Fundamental Areas of Phenomenology	
A41 Electricity and magnetism; fields and charged particles	Basic
A42 Optics	Research
A43 Acoustics	Research
A47 Fluid dynamics	Basic
A50 Fluids, Plasmas and Electric Discharges	
A52 The physics of plasmas and electric discharges	Basic
A60 Condensed Matter: Structure, Thermal and Mechanical Properties	
A61 Structure of liquids and solids; crystallography	Research
A62 Mechanical and acoustic properties of condensed matter	Instructional
A63 Lattice dynamics and crystal statistics	Instructional
A64 Equations of state, phase equilibria, and phase transitions	Research
A66 Transport properties of condensed matter (nonelectronic)	Basic
A68 Surfaces and interfaces; thin films and whiskers	Research
A70 Condensed Matter: Electronic Structure, Electrical, Magnetic, and Optical Properties	
A71 Electronic states in condensed matter	Research
A72 Electronic transport in condensed matter	Research

A73 Electronic structure and electrical properties of surfaces, interfaces, and thin films	Research
A74 Superconductivity	Research
A75 Magnetic properties and materials	Research
A76 Magnetic resonances and relaxation in condensed matter; Mössbauer effect	Research
A77 Dielectric properties and materials	Basic
A78 Optical properties and condensed matter spectroscopy and other interactions of matter with particles and radiation	Research
A79 Electron and ion emission by liquids and solids; impact phenomena	Basic
A80 Cross-Disciplinary Physics and Related Areas of Science and Technology (checked by Bae-Yeun Ha – done)	
A81 Materials science	Basic
A82 Physical chemistry	Research
A87 Biophysics, medical physics, and biomedical engineering	Research
A90 Geophysics, Astronomy and Astrophysics	
A92 Hydrospheric and lower atmospheric physics	Basic
A94 Aeronomy, space physics and cosmic rays	Instructional
A95 Fundamental astronomy and astrophysics, instrumentation and techniques and Astronomical observations	Research
A96 Solar system	Instructional
A97 Stars	Research
A98 Stellar systems; Galactic and extragalactic objects and systems; Universe	Research

All collections are systematically reviewed for currency of information and to ensure that essential and important resources are retained. Superseded editions and titles containing outdated information are withdrawn as necessary. Classic retrospective materials are retained and preserved to serve the needs of historical research.

## Library of Congress Outline – Physics

QB 1-991 Astronomy  
 QC 1-999 Physics

## Other Resources Available

The Library explores opportunities for collaborative purchases with the Ontario Council of University Libraries and the Canadian Research Knowledge Network.

## Appendix 1

### Explanation of Levels of Collecting, adapted from RLG Guidelines

#### Levels of Collecting

##### Out of Scope

Materials to support research and curricula in this subject area are not covered in this Collection Policy Statement. Coverage of interdisciplinary subject areas and topics linked across departments can be identified with references to other Collection Policy Statements.

##### Basic Information/Reference Level

The collection serves to introduce and define the subject. Only the most important reference works, general surveys, the most significant works of major authors, and a limited selection of representative general periodicals are collected.

##### Instructional Support Level (Undergraduate)

The collection supports all courses of undergraduate study. Materials collected include a wide range of reference works, fundamental bibliographic tools, and an extensive collection of monographs and periodicals. Access to owned or remotely-accessed electronic resources, including texts, journals, data sets, etc. is provided.

**Research Level**

The collection includes major published source materials required for master's degree programmes, doctoral study and independent research in the subject. All formats, including appropriate foreign-language titles, are acquired. Historically important monographs, archival materials, and back-runs of serials are acquired as necessary.