

# Collection Policy: PHYSIOLOGY

[Subject Scope](#) | [Priority Tables](#) | [Other policies . .](#)

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## 1.0 TEACHING, RESEARCH AND EXTENSION PROGRAMS

### *1.1 Mission and emphases of the department*

A characteristic of the Department/Section of Physiology is the wide spectrum of interests of its members, including fetal biology, animal reproduction, cardiac, renal and respiratory physiology, vision, behavior, exercise physiology, membrane transport, cellular and molecular biology, endocrinology. The Section of Physiology is affiliated with the College of Agriculture and Life Sciences; the Department of Physiology comprises both members of the Section of Physiology and appointments in the College of Veterinary Medicine.

### *1.2 Faculty research*

Primary appointments in the Department of Physiology: 10 Professors, 3 Senior Research Associates

Primary appointments in the Section of Physiology: 4 Professors

Joint Members, Section/Department of Physiology: 3 Professors

The faculty in the Section are involved in electrophysiology, cellular physiology, renal physiology, vision and endocrinology.

Major research trends/areas in the Department include: animal reproduction, fetal and neonatal physiology and medicine, membrane and epithelial transport.

### *1.3 Graduate program*

23 students

*Concentrations:* behavioral physiology, cardiovascular, renal and respiratory physiology, endocrinology, environmental and comparative physiology, gastrointestinal and metabolic physiology, membrane and epithelial physiology, molecular and cellular physiology, neural and sensory physiology, reproductive physiology

### *1.4 Undergraduate program*

Approximately 120-140 majors (121 in 1989)

Curriculum requirements:

- BS311--Introductory Animal Physiology
- BS313--Histology: the biology of the tissues
- BS316--Cellular Physiology
- BS319--Animal Physiology Experimentation

Career interests of the students: primarily in Human Medicine and Veterinary Medicine.

### *1.5 Extension activity*

None

### *1.6 Noteworthy facilities (e.g. unique classrooms, laboratories, farms, etc.)*

Reed Farm (cows), facilities for dogs, sheep.

## **2.0 SUBJECT DESCRIPTION AND GUIDELINES**

### ***2.1 Subject definition***

NSF Guide to Programs Biol. Scie., 1993, p3: "Organismal biology in the areas of comparative physiology, functional morphology, biomechanics, and physiological ecology"; however included are also areas of cellular and molecular biology.

### ***2.2 Subject scope***

This section is concerned with animal physiology (including all animals) only; plant physiology is studied in the Plant Biology department. The following list includes subjects of interest to the Department of Physiology.

#### Whole-animal physiology

- Design of multicellular animals
- Mammalian fluid compartments
- Homeostasis
- Electrophysiology
- Cardiovascular physiology
- Endocrinology
- Gastrointestinal physiology
- Renal physiology
- Reproductive physiology
- Acid/base physiology

#### Environmental physiology

#### Ecological physiology

#### Comparative physiology

#### Ecological energetics

#### Behavioral physiology

#### Epithelial and membrane biology

#### Cellular physiology

#### Histology

#### Cryobiology

Basic textbooks are of interest in cardiovascular, renal and respiratory physiology, also basic immunology, anatomy and physiology texts and histological atlases.

### **Exclusions:**

- Diseases, except in gastroenterology and reproduction.
- Anatomical drawing
- Kinetics, joints, muscles
- Physiological effects of external substances; e.g., alcohol, drugs, hormone supplements

### ***2.3 Emerging trends in the subject area***

Animal biotechnology; transgenic animals; molecular and cellular aspects of physiology; increased use of phylogenetic reconstruction to provide a context for comparative studies; integration of ecology, behavior with physiology; application to captive husbandry and conservation of endangered species; molecular endocrinology.

## **3.0 SPECIAL INFORMATION NEEDS AND RESOURCES**

### ***3.1 Special information needs of those working in this subject area.***

- Zoological Record online
- Science Citation Index
- Medline
- BIOSIS

Undergraduates should have a collection of general monographs and annual reviews to consult for background information prior to examining primary literature.

### *3.2 Special collections or noteworthy resources in the field*

### *3.3 Endowment funds or special funding arrangements*

- Biomedical Endowment
- Mann -- general biology
- Rice -- poultry
- Wright -- vertebrates
- Clausen -- treatises

## **4.0 TYPES OF MATERIALS**

### *4.1 Priorities for types of materials*

See [Priorities Table](#).

In addition, proceedings are generally not useful if more than about 6 months old.

Monographs with separately-authored chapters can be useful in emerging areas; Cold Stream Harbor and other research centers are good sources; works from commercial publishers such as Elsevier, Karger and Springer Verlag are less useful.

### *4.2 Format*

### *4.3 Geographical guidelines*

Not applicable.

### *4.4 Language guidelines*

Most publications are in English language; however, French journals are important in some areas of physiology.

### *4.5 Chronological guidelines*

Current materials.

## **5.0 OTHER RELATED LIBRARY COLLECTIONS**

- [Flower Library \(Vet School\)](#) -- collects works on diseases and on blood and on bone growth.
- [Physical Sciences Library](#) -- collects biophysics
- [Entomology](#)
- [Engineering Library](#)

## 6.0 POLICY QUESTIONS, COLLECTION NEEDS, FUNDING PROBLEMS OR OPPORTUNITIES

Are the histology atlases available via the Internet of value?

Are works on experimental methods needed by graduate students (e.g., experimental design, dissection, anesthesia, physiographic recording, cell culture techniques)?

## 7.0 PRINCIPAL LC CLASSES

QP1-801  
QM 1-691  
QL 801-991  
QM 573-671

## 8.0 RELATED COLLECTION POLICIES

- [ECOL](#) -- phylogenetic reconstruction
- [ENTO](#)
- [ANSC](#)
- [NEUR](#) -- behavioral physiology, neural and sensory physiology, chronobiology
- [BIOC](#) -- cellular physiology
- [GENE](#) -- physiology of development
- [NATR](#) -- conservation of endangered species, animal rehabilitation
- [NUTR](#)
- Related topics -- popular works on human health, works on psychosomatic disorders

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## Priorities Table for Physiology

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Code	IMPORTANCE/INTENSITY CODES DEFINITIONS
NA	Not applicable to the discipline.
0	Ephemeral; of insufficient value to be provided by library.
1	Of short term interest, but with little or no enduring value; very selectively acquired; retained, uncataloged, for limited duration only, e.g. newsletters in newly emerging, poorly documented areas, and manuals or pamphlets for reserve reading.
2	Limited scholarly interest or utility; collected very selectively, but not of high priority.
3	Important for research and/or instruction; should be well represented, but collected selectively rather than intensively.

4	Very important for faculty and/or students; intensively collected, i.e. every effort is made to provide as deep coverage of this literature as possible.
5	Essential to work in the discipline; the most important type of material for research or instruction purposes. Ensuring the highest possible coverage should be the library's top priority in this discipline.

Code	SERIALS	Notes
5	Journals, scholarly	-
5	Journals, technical	-
-	Journals, other (describe)	-
5	Annual reviews, advances in...	-
3	Scientific and technical reports and research bulletins of major academies, learned societies, professional research and educational organizations and government agencies	-
3	Proceedings, of international congresses and symposia	-
3	Proceedings, national or local	-
NA	Statistical series	-
NA	Trade journals and periodicals	-
NA	Popular periodicals, hobby	-
1	Popular periodicals, semi-technical	-
2	Popular periodicals, farm press	-
1	Newsletters/newspapers	-
2	Proceedings of legislative bodies	-
4	Student publications	theses
1	Administrative publications of major academies, learned societies, professional, research and educational organizations and government agencies	-
1	Corporate annual reports	-
NA	Yearbooks	-

NA	Press releases	-
NA	Lists	-
NA	Working papers	-
<b>Code</b>	<b>MONOGRAPHS</b>	<b>Notes</b>
4	Major scholarly monographs	-
2	Professional and technical	-
1	Subject histories	-
5	Textbooks, upper division, graduate	-
1	Biographies	-
1	Popular monographs	-
2	Technical reports	-
3	Government reports	-
4	Proceedings, international	-
-	Proceedings, other	-
3	Theses and dissertations (outside CU)	-
NA	Festschrift	-
3	Patents	-
1	Corporate histories	-
NA	How-to books & lab manuals	-
NA	Pamphlets	-
NA	Ephemera (describe)	-
NA	Maps	-
1	Technical bulletins/handbooks/compendia	-

Code	ELECTRONIC INFORMATION	Notes
4	Applications programs	-
5	Bibliographic databases	-
3	Bulletin boards	-
3	Fulltext files	-
NA	Geographic information systems	-
2	Numeric/statistical files	-
-	Other (describe, taking as much space a necessary)	-

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[Top of Page](#)