

## Georgia Tech Library Collection Development Policy (Template)

### School of Applied Physiology 2004

#### Collection Development Objectives

The Library & Information Center at Georgia Institute of Technology supports faculty and student research and the curriculum at the master's degree level in the discipline of Applied Physiology; it also supports research projects and programs conducted on behalf of faculty researchers, research engineers, and research scientists in the School's various laboratories and research centers.

#### School Profile -- Overview

The School of Applied Physiology is 1 of 7 schools in the College of Sciences. The School of Applied Physiology has 10 faculty members –including 4 professors, 2 assistant professors, and 4 research scientists. Currently, there is also 1 visiting professor.

AP is the home School for a Focused Master's Program in Prosthetics and Orthotics. Together with units in the College of Engineering, the School offers cutting-edge instruction coupled with sound clinical training and a foundation in movement science. A graduate program offering a Ph.D. is currently under development. The School is unique to the Georgia Tech community but founded in interdisciplinary teaching and research fundamental to the mission of the Institute.

#### School Chair

##### **Dr. Robert J. Gregor**

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#### Group Email Address(es)

None

#### School Web Site

<http://www.ap.gatech.edu/>

## Professional Accreditation

The MSPO Program falls under the auspices of accreditation by [CAAHEP](#), the Commission on Accreditation of Allied Health Education Programs. The CAAHEP committee for prosthetics and orthotics is the National Commission on Orthotic and Prosthetic Education ([NCOPE](#)).

## **School Profile – Curriculum**

### Enrollment

<b>Enrollment</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Undergraduate	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Graduate	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	14	n/a

(Data from the Georgia Institute of Technology 2003 Fact Book, *tables 4.17, 4.18 -- [www.irp.gatech.edu](http://www.irp.gatech.edu)*)

### Degrees offered

<b>Bachelor Degree -- B.S.</b>	<b>Master Degree -- M.S.</b>	<b>Doctoral Degree -- Ph.D.</b>	<b>Undergraduate Certificates</b>
n/a	M.S. Prosthetics and Orthotics	n/a	Certificate in Health Science
			Certificate in Applied Physiology.

The School of Applied Physiology does not offer a bachelor's degree program at the present time. They offer Health/Wellness courses (required for all undergraduates) and courses in Human Anatomy and Physiology, Exercise Physiology, Kinesiological Basis of Human Movement, Muscle Structure, Nutrition, Substance Abuse, etc. AP began granting degrees with the onset of the Georgia Tech Focused Master's Program in Prosthetics and Orthotics, which began Fall 2002. The first class graduated in 2004. The School also hopes to have a Ph.D. program in place in the next two-three years.

The School offers a Certificate in Health Science addressing students' desire for basic medical science education.

The School of Applied Physiology also offers a multidisciplinary Certificate in Applied Physiology. It is designed for students from any major who wish to broaden their educational experiences and career opportunities in areas related to the health sciences, human biology, bioengineering or biomedical engineering. The certificate is based in human anatomy and physiology and human movement sciences, but allows students the flexibility to elect courses in specific areas of interest.

### Degrees Awarded

Degrees	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Bachelors	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Masters	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PhD	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

(Data from the Georgia Institute of Technology 2003 Fact Book, *tables 5.6, 5.7, 5.8* -- [www.irp.gatech.edu](http://www.irp.gatech.edu))

### General Education Course Responsibility

The School instructs all Georgia Tech students in their health and wellness requirement.

HPS 1040, Health Concepts & Strategies, is a 2 hour credit course which satisfies the core health education requirement for graduation. The class consists of a one-hour lecture and meets twice per week. Course content focuses on the critical analysis of health information, the development of strategies to promote good health, and assumption of personal responsibility for health enhancement.

HPS 106x, Fitness Concepts: A Wellness Approach, is a 2 hour credit course which satisfies the core health education requirement for graduation. The class is scheduled in a two-hour block, twice per week. It consists of 30-45 minutes of lecture combined with physical activity conditioning sessions. Topics focus on the health-related components of physical fitness, designing an appropriate training program to meet target goals, and diet and nutrition.

With respect to the exercise activity, students register for one of three sections: Cross-training (HPS 1064), Running (HPS 1062), or Swimming (HPS 1063). This signifies what the primary mode of cardiovascular training will be, although other activities (such as resistance training) may also be incorporated. All students are then expected to pass minimum fitness standards by the end of the semester.

## **School Profile -- Research**

### Major Faculty Research Interests

Faculty in the School of Applied Physiology (AP) are focused on understanding the science of movement, the physiological basis of movement control and on instruction related to the importance of maintaining sound physiological systems. The approach to these tasks involves every biological level utilizing both basic and applied sciences. For example, attempts to understand how molecules transmit signals in skeletal muscle have a foundation in basic molecular biology and ultimately relate to the applied science of movement control. Faculty interests range from the behavioral (Alberts, Sparling) to the systemic (Chang, Gregor, Millard-Stafford) to the molecular levels (Burkholder).

Some current research areas include:

- understanding and describing underlying mechanisms of coordinated actions and identifying structure-function relationships, particularly the basal ganglia and cerebellum, within the Central Nervous System (CNS)
- the coordination of skeletal muscle structure and function
- questions related to Neuromuscular biomechanics and the control of movement
- Tai Chi intervention and the prevention of falls in the elderly
- implantable transducers capable of measuring force in muscle-tendon units in the adult cat
- multidisciplinary approaches to prosthetic and orthotic rehabilitation
- exercise physiology, particularly the effects of nutritional interventions on physiological responses and exercise performance
- the mechanisms of movement generation and control at different levels of biological organization
- the role of lifestyle and nutrition on health - particularly the impact of lifestyle on disease prevention, the role of nutrition in optimal health, and detection and prevention of osteoporosis
- the area of statistical and measurement issues related to health
- body composition assessment, bone densitometry, and behavioral factors associated with physical activity patterns
- understanding exercise as a health behavior – including gender differences in exercise performance, body composition assessment techniques, and environmental influences on endurance performance.

**Collection Development Responsibility** [to be discussed in July 2004]

**Classed Analysis (based on Library of Congress classifications)** [to be discussed in fall 2004]