

BIOMEDICAL SCIENCES - PHYSIOLOGY INTERDISCIPLINARY - M.S.

College of Arts and Sciences
School of Biomedical Sciences
www.kent.edu/biomedical

About This Program

The Master of Science in Biomedical Sciences-Physiology Interdisciplinary program offers a comprehensive education in physiology, anatomy and related fields, preparing you for a wide range of careers in industry, government and academia. With access to cutting-edge research facilities, experienced faculty and real-world opportunities, you'll gain the skills and knowledge needed to make an impact in this exciting field. Read more...

Contact Information

- Director: **John Johnson** | BMS@kent.edu | 330-672-3849
- Connect with an Admissions Counselor: U.S. Student | International Student

Program Delivery

- **Delivery:**
 - In person
- **Location:**
 - Kent Campus

For more information about graduate admissions, visit the graduate admission website. For more information on international admissions, visit the international admission website.

Admission Requirements

- Bachelor's degree from an accredited college or university
- Minimum 2.750 undergraduate GPA on a 4.000-point scale
- Academic preparation adequate to perform graduate work in the desired field (recommended courses in chemistry, cell biology and physiology)
- Official transcript(s)
- Curriculum vitae/résumé is required starting with the fall 2024 admission term
- Goal statement that includes a description of the applicant's research experience, research interests and career goals
- Three letters of recommendation
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning one of the following:
 - Minimum 600 TOEFL PBT score
 - Minimum 100 TOEFL IBT score
 - Minimum 85 MELAB score
 - Minimum 7.0 IELTS score

- Minimum 68 PTE score
- Minimum 120 Duolingo English score

Application Deadlines

- **Fall Semester**
 - Application deadline: December 1

Applications submitted after this deadline will be considered on a space-available basis.

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements		
BMS 61000	RESPONSIBLE CONDUCT OF RESEARCH	1
BMS 61001	INTRODUCTION TO BIOMEDICAL SCIENCES	1
CHEM 50245	BIOCHEMICAL FOUNDATIONS OF MEDICINE	4
Biostatistical Analysis Electives, choose from the following:		4-6
ANTH 68637	BIOANTHROPOLOGICAL DATA ANALYSIS I	
BSCI 60104	BIOLOGICAL STATISTICS	
EXPH 63050 & EXPH 63051	RESEARCH PROCESS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY and QUANTITATIVE AND RESEARCH METHODS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY	
Neuroscience or Exercise Physiology Electives, choose from the following:		4-6
BMS 60729	CELLULAR AND MOLECULAR NEUROSCIENCE	
BSCI 50460 & BSCI 50462	ADVANCED HUMAN PHYSIOLOGY and ADVANCED HUMAN PHYSIOLOGY: READINGS AND CASE STUDIES	
EXPH 65081 & EXPH 65082	ENERGY METABOLISM AND BODY COMPOSITION and CARDIO-RESPIRATORY FUNCTION	
Electives ¹		8-10
<i>Culminating Requirement</i>		
BMS 60199	THESIS I	6
Minimum Total Credit Hours:		32

¹ Elective courses and research must be approved by the student's thesis committee.

Graduation Requirements

- Minimum 17 credit hours of overall hours must be letter graded (required and elective courses).

Program Learning Outcomes

Graduates of this program will be able to:

1. Publish their research in peer-reviewed journals.
2. Demonstrate the ability to teach undergraduate students.
3. Seek employment after graduation in fields that reflect their area of training.

Full Description

The Master of Science degree in Biomedical Sciences–Physiology Interdisciplinary prepares graduates in areas that include cardiovascular,

pulmonary, endocrine and neuroendocrine, reproductive or exercise physiology. In this context, emphasis is placed on an integrative approach for both research and graduate education. As with other program areas, the Biomedical Sciences–Physiology Interdisciplinary major takes advantage of the latest molecular and cellular techniques to address questions related to human diseases.

The M.S. degree is offered in consortium with Cleveland Clinic and Northeast Ohio Medical University (NEOMED). Faculty members are drawn from various departments at Kent State and the other two institutions. Although graduate work may be completed in any of the various research areas, faculty are listed in two general specializations: (1) environmental and comparative physiology and (2) cardiopulmonary and exercise physiology. Each specialization addresses different subject areas of physiology and each has an associated training faculty.

The degree program is research oriented and designed to provide students with a thorough grounding in physiological principles and techniques within several well-defined focus areas.