BIOMEDICAL SCIENCES
- PHYSIOLOGY
INTERDISCIPLINARY - M.S.

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

Contact Information
• Director: John Johnson | BMS@kent.edu | 330-672-3849
• Chat with an Admissions Counselor

Fully Offered
• Delivery: In person
• Location: Kent Campus

Admission Terms
• Fall

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.

Faculty members are drawn from various departments at Kent State University, Northeast Ohio Medical University (NEOMED) and the Lerner Research Institute of the Cleveland Clinic. 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.

The M.S. degree in Biomedical Sciences—Physiology Interdisciplinary is offered in consortium with Cleveland Clinic and Northeast Ohio Medical University.

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 (typically, two years of chemistry, one year of mathematics, one year of physics and courses in anthropology, biology and/or psychology)

• Official transcript(s)
• GRE scores (effective for spring 2023 admissions, the GRE will no longer be required)
• Goal statement
• 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 (paper-based version)
  - Minimum 100 TOEFL IBT score (Internet-based version)
  - Minimum 85 MELAB score
  - Minimum 7.0 IELTS score
  - Minimum 68 PTE score
  - Minimum 120 Duolingo English test score

Admission with deficiencies may be accorded, but these must be made up during the first two years of graduate study. For more information about graduate admissions, visit the graduate admission website. For more information on international admission, visit the Office of Global Education’s admission website.

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.

Program Requirements

Major Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS 61000</td>
<td>RESPONSIBLE CONDUCT OF RESEARCH</td>
<td>1</td>
</tr>
<tr>
<td>BMS 61001</td>
<td>INTRODUCTION TO BIOMEDICAL SCIENCES</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 50245</td>
<td>BIOCHEMICAL FOUNDATIONS OF MEDICINE</td>
<td>4</td>
</tr>
<tr>
<td>Biostatistical Analysis Electives, choose from the following:</td>
<td>4-6</td>
<td></td>
</tr>
<tr>
<td>ANTH 68637</td>
<td>BIOANTHROPOLOGICAL DATA ANALYSIS I</td>
<td></td>
</tr>
<tr>
<td>BSCI 60104</td>
<td>BIOLOGICAL STATISTICS</td>
<td></td>
</tr>
<tr>
<td>EXPH 63050 &amp; EXPH 63051</td>
<td>RESEARCH PROCESS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY</td>
<td></td>
</tr>
<tr>
<td>&amp; EXPH 65081 &amp; EXPH 65082</td>
<td>ENERGY METABOLISM AND BODY COMPOSITION AND CARDIO-RESPIRATORY FUNCTION</td>
<td></td>
</tr>
</tbody>
</table>

Neuroscience or Exercise Physiology Electives, choose from the following: 4-6

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS 60729</td>
<td>CELLULAR AND MOLECULAR NEUROSCIENCE</td>
</tr>
<tr>
<td>BSCI 50460</td>
<td>ADVANCED HUMAN PHYSIOLOGY</td>
</tr>
<tr>
<td>&amp; 50460</td>
<td>and ADVANCED HUMAN PHYSIOLOGY</td>
</tr>
<tr>
<td>EXPH 65081</td>
<td>ENERGY METABOLISM AND BODY COMPOSITION</td>
</tr>
<tr>
<td>&amp; EXPH 65082</td>
<td>and CARDIO-RESPIRATORY FUNCTION</td>
</tr>
</tbody>
</table>

Electives 1 8-10

Culminating Requirement

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS 60199</td>
<td>THESIS I</td>
<td>6</td>
</tr>
</tbody>
</table>

Minimum Total Credit Hours: 32
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).