

# BIOMEDICAL SCIENCES - PHARMACOLOGY - PH.D.

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 Ph.D. degree in Biomedical Sciences–Pharmacology provides substantial opportunity for students to conduct research in molecular targeting, drug design and drug delivery in developing new approaches to treat disease. The multidisciplinary program enrolls a select group of graduate students interested in research-based careers in pharmacology and provides a balance of classroom and laboratory work involving faculty at Kent State University and Northeast Ohio Medical University (NEOMED). Strong research foci exist in the areas of cardiovascular and metabolic diseases, neurodegenerative and blood brain barrier pharmacology. Interdisciplinary approaches to research and theoretical problems are strongly emphasized.

The Ph.D. degree in Biomedical Sciences–Pharmacology is offered in consortium with Cleveland Clinic and Northeast Ohio Medical University.

## Admission Requirements

- Bachelor's degree or higher from an accredited college or university
- Minimum 2.750 undergraduate/graduate GPA on a 4.000 point scale
- Academic preparation adequate to complete graduate coursework in general chemistry, organic chemistry, biochemistry, physics and physiology
- Official transcript(s)
- GRE general test scores (*effective for spring 2023 admissions, the GRE will no longer be required*)
- Goal statement indicating the applicant's interests in pharmacology and career aspirations
- 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

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 in fields that reflect their area of training

## Program Requirements

### Major Requirements

Code	Title	Credit Hours
<b>Major Requirements</b>		
BMS 70120	LABORATORY TECHNIQUES IN BIOMEDICAL SCIENCES (taken twice)	4
BMS 70440	CELLULAR AND MOLECULAR SIGNALING	3
BMS 70502	MOLECULAR PHARMACOLOGY	4
BMS 70503	PHARMACOLOGY JOURNAL REVIEW	1
BMS 71000	RESPONSIBLE CONDUCT OF RESEARCH	1
BMS 71001	INTRODUCTION TO BIOMEDICAL SCIENCES	1
BMS 78637	BIOANTHROPOLOGICAL DATA ANALYSIS I	3-5
or BSCI 70104	BIOLOGICAL STATISTICS	
or PSYC 71651	QUANTITATIVE STATISTICAL ANALYSIS I	
Electives <sup>1</sup>		11-13
<b>Culminating Requirement</b>		
BMS 80199	DISSERTATION I <sup>2</sup>	30
<b>Minimum Total Credit Hours for Post-Baccalaureate Students:</b>		<b>90</b>
<b>Minimum Total Credit Hours for Post-Master's Students:</b>		<b>60</b>

<sup>1</sup> Elective courses and research must be approved by the student's guidance committee.

<sup>2</sup> Upon completion of course requirements and candidacy exam, doctoral students must register for BMS 80199 for two semesters for a total of 30 credit hours. Thereafter, it is expected that a doctoral candidate will continuously register for BMS 80299 each semester until all requirements for the degree have been met. As soon after completion of the candidacy examination as possible, the dissertation committee will be established consisting of the guidance committee and an outside discipline member – a graduate faculty member from another department at Kent State University or another program of the School of Biomedical Sciences. The student will submit to this committee their prospectus for the dissertation. The format of the prospectus will parallel that utilized for National Institutes of Health grant proposals (without biographical, budget and facilities information). The dissertation committee may elect to examine the candidate on the proposal, may accept it as submitted, or may reject it with specific reasons and recommendations for reformulation.

## **Graduation Requirement**

Post-baccalaureate students must complete a minimum 60 credit hours, and post-master's students a minimum 30 credit hours, of coursework prior to dissertation.