

BIOMEDICAL SCIENCES - PHARMACOLOGY - PH.D.

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

About This Program

The Ph.D. in Biomedical Sciences - Pharmacology program offers a comprehensive education in pharmacology, toxicology and related fields, preparing you to become a leader in industry, government or academia. With a focus on hands-on experience and collaboration, you will have the opportunity to work with experienced researchers in state-of-the-art facilities, advancing your understanding of drug development and preparing you for a fulfilling career 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 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 (recommended courses in chemistry, biochemistry and physiology)
- Official transcript(s)
- Curriculum vitae/résumé
- Goal statement indicating the applicant's interests in pharmacology, their research experience 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
 - 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 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 ¹ | | 11-43 |
| Culminating Requirement | | |
| BMS 80199 | DISSERTATION I ² | 30 |
| Minimum Total Credit Hours for Post-Baccalaureate Students: | | 90 |
| Minimum Total Credit Hours for Post-Master's Students: | | 60 |

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

² 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 Requirements

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.

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.

Full 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.