

**Course Requirements for GPN Students  
in the Biomolecular Pharmacology Training Program  
2022-2023**

Students can take pharmacology curriculum during years 1, 2 and/or 3. Pharmacology requirements fulfill 10 credits of the elective coursework requirement (12 credits) in the Graduate Program for Neuroscience (GPN).

A potential scheduling of pharmacology academic requirements (presented in bold lettering) in relationship to the GPN required curriculum is presented below. Dissertation thesis credits are not represented in the requirements on this page and make up the 64 credits needed for partial fulfillment of the PhD. degree. There is a total of 35 credits listed below that include core GPN and Pharmacology offerings, special training modules in computational neuroscience, a year-long professional development class that emphasizes oral presentation skills, critical review of the literature and grant writing. There is also credit for clinical rounds that take place at the VA hospital. Students can take additional academic credits as represented below by italicized "optional" coursework after consultation with their GPN advisors.

Year 1 Fall (12 cr)

GMS AN 810 Principles of Neuroscience I: From Molecules to Systems (4 cr)

GMS NE 500 Frontiers in Neuroscience (2 cr)

GMS NE 800 Laboratory Rotations (2 cr)

**GMS PM 701 Molecular and Translational Pharmacology I (2 cr)**

GRS MA 665 Introduction to Mathematical Models & Data Analysis in Neuroscience (2 cr for 7 week module required, *optional additional 2 cr module*)

Year 1 Spring (10 cr)

GMS AN 801 Principles of Neuroscience II: From Systems to Mind (4 cr)

GMS NE 501 Frontiers in Neuroscience (2 cr)

GMS NE 801 Laboratory Rotations (2 cr)

**GMS PM 702 Molecular Neurobiology and Pharmacology II (2 cr)**

*Optional GPN elective (2m 4cr)*

Year 2 Fall (9 cr)

GMS NE 901 Clinical Rounds (1 cr)

**GMS PM 801 Systems Pharmacology & Therapeutics I (2 cr)**

GRS MA681 Accelerated introduction to statistical methods for quantitative research (4 cr)

GMS MS 783: Molecular Basis of Neurologic Diseases (2 cr) (Strongly suggested for required 2 credit GPN elective for all molecular neuroscience students)

*Optional GPN elective (2m 4 cr)*

Year 2 Spring (4 cr)

*Optional GMS NE 902 Clinical Rounds (1m cr)*

*Optional GPN elective (2m 4 credits)*

**GMS PM 802 Systems Pharmacology & Therapeutics II (2 cr)**

**GMS FC 707 Physiology of Specialized Cells (2 cr)**

List of Pharmacology Curriculum Requirements (10 credits total)

GMS PM 701 Molecular Neurobiology & Pharmacology I (2 cr, sem I)

GMS PM 702 Molecular Neurobiology & Pharmacology II (2 cr, sem II)

GMS FC 707 Physiology of Specialized Cells (2 cr, sem II)

GMS PM 801 Systems Pharmacology & Therapeutics I (2 cr)

GMS PM 802 Systems Pharmacology & Therapeutics II (2 cr)

### **Extracurricular Requirements**

In addition to the core coursework in neuroscience and the requirements to remain in good standing within that particular PhD granting program, GPN/Pharmacology students are expected to attend 50% of the weekly pharmacology seminar series that is held almost every Wednesday at 2:00 pm on the MED campus. If GPN students successfully compete for a slot on the NIGMS T32 Training Grant in Biomolecular Pharmacology, they can take a summer rotation at Pfizer.