In the first year, students are REQUIRED to complete a core curriculum that includes the following courses:

**Quarter I:**
- **PHAR 5012 01** Essential Principles of Pharmacology *(One week introduction to pharmacology)*
  Dr. Inturrisi, Director along with other Pharmacology Faculty
- **PHAR.5005.01** Principles of Pharmacology I: Chemical Biology
  Drs. Sauve and Luo, Co-Directors
- **Next-Gen Methods For Neuroscience and Pharmacology**
  Dr. John Wagner (Neuroscience), Director, Dr. Michael Kharas, Course Co-Director
- **PHAR.5012.01** Critical Analysis of the Scientific Literature in Pharmacology
  Drs. Jaffrey and Gross, Co-Directors

**MANDATORY COURSE:** Tri-Institutional Course - *(Responsible Conduct of Research, RCR)*
  Dr. Randi Silver, Associate Dean

**Quarter II:**
- **PHAR.5012.01** Principles of Pharmacology II: Signal Transduction
  Drs. Jaffrey and Gross, Co-Directors
- **Next-Gen Methods For Neuroscience and Pharmacology**
  Dr. John Wagner (Neuroscience), Director, Dr. Michael Kharas, Course Co-Director
- **PHAR.5008.01** Critical Analysis of the Scientific Literature in Pharmacology
  Dr. Jaffrey and Gross, Co-Directors

**Quarter III:**
- **PHAR.5007.03** Principles of Pharmacology III: Principles and Systems Pharmacology
  Drs. Levi and Levin, Co-Directors
- **PHAR.5002.03** Neuropharmacology I: Genes, Drugs and Behavior
  Dr. Toth, Director, Dr. Hochrainer, Co-Director
- **PHAR.9501.03** Pharmacology Seminar Series
  Dr. Rifkind, Director

**Quarter IV:**
- **PHAR.5008.04** Principles of Pharmacology IV: Molecular Pharmacology of Cancer
  Drs. Li and Scheinberg, Co-Directors
- **PHAR.5011.04** Neuropharmacology II: Neuropeptides and Pain and Drugs of Abuse
  Drs. Inturrisi, Director
- **PHAR.9501.03** Pharmacology Seminar Series
  Dr. Rifkind, Director

Students will also complete one 2-quarter elective and a 1-quarter required course titled, Quantitative Biology by course director, Dr. Jason Banfelder by June of their second year. The 2-quarter elective must be selected from the following:

- Biochemistry and Structural Biology *(Qtrs. I and II)*
- Fundamental Immunology *(Qtrs. I and II)*
- Molecular Genetics *(Qtrs. I and II)*
- Cell Biology *(Qtrs. III and IV)*
- Gene Structure and Function *(Qtrs. III and IV)*
- **PHAR.5009.01** From Bench to Bedside: Business Fundamentals for Entrepreneurial Scientists *(Qtr. I)*

*If you wish to request to take an elective not listed, you must email the program director & coordinator regarding this request*