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. Charles Inturrisi, Director along with other Pharmacology Faculty
- **PHAR.5005.01** Principles of Pharmacology I: Chemical Biology
  Dr. Anthony Sauve and Dr. Minkui Luo, Co-Directors
- **NEUR 5005 01** Next-Gen Methods For Neuroscience and Pharmacology
  Dr. John Wagner (Neuroscience), Director, Dr. Michael Kharas, Course Co-Director
- **PHAR.5001.01** Critical Analysis of the Scientific Literature in Pharmacology
  Dr. Samie Jaffrey and Dr. Steven Gross, Co-Directors

**MANDATORY COURSE:** Tri-Institutional Course - *(Responsible Conduct of Research, RCR)*
*(course is taken at MSKCC, your coordinator will help you register)*

**Quarter II:**
- **PHAR.5006.02** Principles of Pharmacology II: Signal Transduction
  Dr. Samie Jaffrey and Dr. Steven Gross, Co-Directors
- **NEUR.5005.01** Next-Gen Methods For Neuroscience and Pharmacology
  Dr. John Wagner (Neuroscience), Director, Dr. Michael Kharas, Course Co-Director
- **PHAR.5001.01** Critical Analysis of the Scientific Literature in Pharmacology
  Dr. Samie Jaffrey and Dr. Steven Gross, Co-Directors

**Quarter III:**
- **PHAR.5007.03** Principles of Pharmacology III: Principles and Systems Pharmacology
  Dr. Roberto Levi and Dr. Lonny Levin, Co-Directors
- **PHAR.5002.03** Molecular Neuropharmacology I: Genes, Drugs and Behavior
  Dr. Miklos Toth, Director, Dr. Karin Hochrainer, Co-Director
- **PHAR.9501.03** Pharmacology Seminar Series - **Annual Registration Required**
  Dr. Arleen Rifkind, Director

**Quarter IV:**
- **PHAR.5008.04** Principles of Pharmacology IV: Molecular Pharmacology of Cancer
  Dr. Yueming Li and Dr. David Scheinberg, Co-Directors
- **PHAR.5011.03** Neuropharmacology II: Neuropeptides and Pain and Drugs of Abuse
  Dr. Charles Inturrisi, Director
- **PHAR.9501.03** Pharmacology Seminar Series - **Annual Registration Required**
  Dr. Arleen Rifkind, Director

**ELECTIVES: 2nd year and beyond:**
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:

- Fundamental Immunology (Qtrs. I and II)
- Molecular Genetics (Qtrs. I and II)
- **PHAR.5009.01** From Bench to Bedside: Business Fundamentals for Entrepreneurial Scientists (Qtr. I)
- **PHAR 5014 03** Drug Development Course: FROM MOLECULE TO PRESCRIPTION *(Qtr. 3 & 4)*

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