

Winkle College of Pharmacy
Pharmaceutical Sciences Graduate Program
PhD Degree Minimum Requirements

Drug Development Sciences - PhD

| Required Didactic & Research Courses | Course Number | Credit Hours |
|---|-------------------------|--------------|
| Ethics in Research | GNTD7003 | 1 |
| Principles of Pharmaceutical Sciences | PHID7010 | 3 |
| Molecular and Cellular Biology | GNTD7001 | 3 |
| Biochemistry and Cellular Signaling | GNTD7002 | 3 |
| Statistics (<i>choose one of the following courses</i>) | | 3 |
| Statistical Principles in Clinical Research (PHDD8060, 3 cr hrs) | | |
| Introduction to Biostatistics (BE7022, 3 cr hrs) | | |
| Journal Club in Pharmaceutical Sciences | PBIO7004 | 4 |
| Seminar in Pharmaceutical Sciences | PHID7005 | 4 |
| Research in Pharmaceutical Sciences | PHID7001 | 12 |
| Elective Courses* (see examples below) | | 12 |
| | Required Courses | 45 |
| Supplemental Elective Courses* and/or Research in Pharmaceutical Sciences | | 15 |
| PhD Dissertation Research | PHID9001 | 30 |
| | TOTAL | 90 |

***Examples of Elective Courses**

- Research in Pharmaceutical Sciences (PHID7001, variable 1-12 cr hrs)
- Advanced Pharmaceutics II (PCEU7030, 3 cr hrs)
- Global Regulatory & Development Strategies of Drugs/Medical Devices (PHDD8010, 3 cr hrs)
- Phase I/II Clinical Trial Design & Research (PHDD8050, 3 cr hrs)
- Phase III/IV Clinical Trial Design & Research (PHDD8070, 3 cr hrs)
- Pharmaceutical Economics & Management (PHDD8080, 3 cr hrs)
- Introduction to Functional Genomics (GNTD8001C, 3 cr hrs)
- Cancer Biology and Therapeutics (CB8080, 4 cr hrs)
- Scientific Writing (CB9022, 2 cr hrs)