

**Winkle College of Pharmacy
Pharmaceutical Sciences Graduate Program
MS Degree Minimum Requirements**

MS - Drug Development Sciences (replaces "Pharmacology" track)

Required Didactic & Research Courses	Course Number	Credit Hours
Ethics in Research	GNTD7003	1
Principles of Pharmaceutical Sciences	PHID7010	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	2
Seminar in Pharmaceutical Sciences	PHID7005	2
Research in Pharmaceutical Sciences	PHID7001	3
Elective Courses* (see examples below)		3
	Required Courses	20
MS Thesis Research	PHID8001	10
	TOTAL	30

***Examples of Elective Courses**

- Research in Pharmaceutical Sciences (PHID7001, variable 1-12 cr hrs)
- Advanced Pharmaceutics II (PCEU7030, 3 cr hrs)
- Molecular and Cellular Biology (GNTD7001, 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)