

## Doctor of Pharmacy Degree Requirements

Following admission to the professional division, the entry-level Pharm.D. program students will complete a bachelor of science in pharmaceutical sciences degree prior to more focused course work on pharmacotherapy and pharmaceutical care. Students in the entry-level Pharm.D. track who have completed the bachelor of science in pharmaceutical sciences degree at The University of Toledo are eligible to continue in the Pharm.D. program. Students who have completed a five year B.S. in Pharmacy degree and who wish to obtain a Pharm.D. degree should see the graduate section of the catalog

In order to graduate with a Pharm.D. degree, students must meet the current academic performance standards. Only students who successfully complete the Pharm.D. degree will qualify for licensure in the practice of pharmacy. A total of 135 semester hours is required for graduation with the bachelor of science in pharmaceutical sciences-Pharm.D. track degree. The curriculum is outlined below.

## Preprofessional Division Requirements

### First Year

#### First Semester

BIOL	2150	Fundamentals of Life Sci. I .....	4
BIOL	2160	Fundamentals of Life Sci. Lab I .....	1
CHEM	1230	General Chemistry I.....	4
CHEM	1280	General Chemistry Lab I.....	1
MATH	1750	Calculus for the Life Sciences I.....	4
PHPR	1000	Orientation .....	1
UT Core Requirement (ENG 1110)* .....			3

#### Second Semester

BIOL	2170	Fundamentals of Life Sci. II .....	4
BIOL	2180	Fundamentals of Life Sci. Lab II.....	1
CHEM	1240	General Chemistry II .....	4
CHEM	1290	General Chemistry Lab II .....	1
MATH	1760	Calculus for the Life Sciences II .....	3
UT Core Requirement (ENG 1130 or equivalent)* .....			3

### Second Year

#### First Semester

CHEM	2410	Organic Chemistry I.....	3
CHEM	2460	Organic Chemistry Lab I .....	1
PHCL	2600	Funct. Anat. & Pathophysiology I.....	4
PHYS	1750	Introduction to Physics or equiv.....	4
UT Core Requirement (PSY 1010 or SOC 1010)* .....			3

#### Second Semester

CHEM	2420	Organic Chemistry II .....	3
CHEM	2470	Organic Chemistry Lab II.....	1
PHCL	2620	Funct. Anat. & Pathophysiology II.....	4
UT Core Requirement (ECON 1200)* .....			3
UT Core Requirement (Humanities/Fine Arts)* .....			3
UT Core Requirement (Humanities/Fine Arts)** .....			3

\*Suggested sequence

\*\*Select a course that will simultaneously fulfill a UT diversity studies Core Curriculum requirement.

## Professional Division Requirements

### P1 Year

#### First Semester

## PharmD Curriculum for students entering the P1 year before Fall 2009: Page 2

MBC	3310	Medicinal Chemistry I .....	2
MBC	3550	Physiological Chemistry I.....	3
PHCL	3700	Pharmacology I.....	3
PHPR	3010	Pharmaceutical Calculations.....	2
PHPR	3070	Pharmaceutics I.....	4
PHPR	3510	Pharmaceutic Dimensions of Hlth Care Sys ...	3
PHPR	3920	Introductory Pharmacy Practice Experience	1 1

### *Second Semester*

MBC	3320	Medicinal Chemistry II .....	3
MBC	3560	Physiological Chemistry II .....	3
MBC	3800	Microbiology & Immunology.....	3
MBC	3850	Microbiology & Immunology Lab .....	1
PHCL	3720	Pharmacology II.....	3
PHPR	3080	Pharmaceutics II.....	4

### **P2 Year**

#### *First Semester*

MBC	4300	Medicinal Chemistry III.....	3
PHCL	4150	Biopharmaceutics & Pharmacokinetics.....	4
PHCL	4700	Pharmacology III .....	3
PHPR	4400	Human Interactions in Healthcare .....	2
PHPR	4410	Professional Practice Development I.....	3
PHPR	4430	Pathophysiology and Pharmacotherapy (PPT): Introduction.....	1
PHPR	4920	Introductory Pharmacy Practice Experience	2 1

#### *Second Semester*

PHCL	4720	Pharmacology IV .....	3
PHPR	4420	Professional Practice Development II .....	3
PHPR	4440	PPT: Immunology.....	2
PHPR	4450	PPT: Renal .....	3
PHPR	4520	Management and Marketing .....	3
UT Core requirement (Diversity Studies).....			3

Note: At the end of the fourth year, students are candidates for a B.S. degree in pharmaceutical sciences leading toward a Pharm.D. degree.

### **P3 Year**

#### *First Semester: Summer Immediately Following P2 Year*

PHCL	5140	Interpretation of Pharm. Data .....	2
PHPR	6210	Introduction to Research Methods.....	2
PHPR	6440	PPT: Infectious Disease .....	4
PHPR	6940	Early Practice Exposure.....	2
Graduate Professional Electives*			2-3

#### *Second Semester: Fall Semester-P3 Year*

PHPR	6160	Advanced Applied Pharmacokinetics.....	3
PHPR	6230	Patient Care Rounds I.....	3
PHPR	6380	PPT: Endocrinology.....	2
PHPR	6420	PPT: Cardiology.....	4
PHPR	6430	PPT: Pulmonary .....	3
PHPR	8470	PPT: Rheumatology.....	1
Graduate Professional Electives*			2

#### *Third Semester: Spring Semester-P3 Year*

PHPR	6240	Patient Care Rounds II.....	3
PHPR	6250	Self Care.....	3
PHPR	6510	PPT: Poison Management.....	1
PHPR	6550	Management Topics for Clinical Practice .....	2

## PharmD Curriculum for students entering the P1 year before Fall 2009: Page 3

PHPR	6610	Seminar I.....	1
PHPR	8390	PPT: Gastroenterology.....	2
PHPR	8480	PPT: Neurology and Psychiatry .....	3
		Graduate Professional Electives* .....	2-3

### P4 Year

#### *Fourth Semester: Summer Immediately Following P3 Year*

PHPR	6370	PPT: Critical Care/Nutrition.....	1
PHPR	6490	PPT: Hematology/Oncology.....	3
PHPR	8260	Jurisprudence & Ethics for Pharmacy. ....	1
PHPR	8500	PPT: Geriatrics and Pediatrics .....	2
PHPR	8620	Seminar II.....	1
PHPR	8640	PPT: Capstone.....	2
		Graduate Professional Electives* .....	2-3

\*A total of 5 credit hours of Graduate Professional Electives is required

#### *Fifth Semester: Fall Semester-P4 Year*

PHPR	8630	Seminar III .....	2
PHPR	8940:001	Advanced Pharmacy Practice Experience I....	4
PHPR	8940:002	Advanced Pharmacy Practice Experience II ...	4
PHPR	8940:003	Advanced Pharmacy Practice Experience III..	4
PHPR	8940:004	Advanced Pharmacy Practice Experience IV..	4

#### *Sixth Semester: Spring Semester-P4 Year*

PHPR	8940:005	Advanced Pharmacy Practice Experience V ...	4
PHPR	8940:006	Advanced Pharmacy Practice Experience VI..	4
PHPR	8940:007	Advanced Pharmacy Practice Experience VII	4
PHPR	8940:008	Advanced Pharmacy Practice Experience VIII	4

Note: At the end of the P4 year, students are candidates for a Pharm.D. degree.

## Pharm.D. Professional Electives

The following is a list of recommended professional electives. Other electives may be chosen with the written approval of a faculty adviser.

### MBC

MBC	5100/ 7100	Research Practices in Medicinal Chemistry ....	1
MBC	5380	Medicinal & Poisonous Plants.....	3
MBC	5620/ 7620	Biochemical Techniques.....	2
MBC	6100/ 8100	Advanced Immunology.....	2
MBC	6190/ 8190	Advanced Medicinal Chemistry .....	4
MBC	6200/ 8200	Biomedical Chemistry .....	4
MBC	6420	Protein Chemistry/CHEM 6510/8510 .....	2 or 4
MBC	6430/ 8430	Nucleic Acid Chem/CHEM 6530/8530.....	2 or 4
MBC	6440/ 8440	Enzymology/CHEM 6520/8520 .....	2 or 4
MBC	6750/ 8750	Bioorganic Chemistry: Chemical Approaches to Enzymes.....	3
MBC	6800/ 8800	Methods in Biotechnology.....	3

### PHCL

PHCL	5300	Selected Topics in Pharmacology.....	2
PHCL	5630	Cancer Chemotherapy.....	3
PHCL	5730	Toxicology I.....	3

## PharmD Curriculum for students entering the P1 year before Fall 2009: Page 4

PHCL	5750	Toxicology II .....	3
PHCL	5760	Toxicokinetics .....	3
PHCL	5900	Drug Disposition .....	2
PHCL	5990	Problems in Pharmacology .....	1 to 6
PHCL	6150	Advanced Pharmacokinetics .....	2
PHCL	6600	Seminar in Pharmacology .....	1
PHCL	6770	Toxicological Risk Assessment .....	3

### PHPR - Administration

PHPR	5990	Problems in Pharmacy Practice .....	1 to 6
PHPR	6530	Research Methods in Pharmacy Practice .....	3
PHPR	6600	Seminar in Administrative Pharmacy .....	1
PHPR	6810	Hospital Pharmacy Administration .....	3
PHPR	6820	Selected Topics in Hospital Pharmacy .....	3
PHPR	6830	Advanced Community Pharmacy Administration .....	3
PHPR	6840	Selected Topics in Community Pharmacy .....	3
PHPR	6980	Special Topics .....	1 to 5

### PHPR - Industrial

PHPR	5680	Parenteral Manufacturing .....	2
PHPR	5690	Dosage Form Design .....	3
PHPR	5710	Selected Topics in Pharmaceutical Techniques .....	2 to 3
PHPR	5720	Pharmaceutical Rate Processes .....	3
PHPR	5990	Problems in Pharmacy Practice .....	1 to 6
PHPR	6950	Seminar in Industrial Pharmacy .....	1
PHPR	6980	Special Topics .....	1 to 5

### PHPR - Clinical

PHPR	6980	Special Topics .....	1 to 5
PHPR	8540	Geriatric Monitoring Principles .....	3