

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.

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 136 semester hours is required for graduation with the bachelor of science in pharmaceutical sciences-Pharm.D. track degree. The curriculum is outlined below.

Professional Division Requirements

PPT: Pathophysiology and Pharmacotherapy

PPD: Professional Practice Development

PHCAD: Pharmacy Health Care Administration

IPPE: Introductory Pharmacy Practice Experience

APPE: Advanced Pharmacy Practice Experience

P1 Year

Fall Semester

MBC	3310	Medicinal Chemistry I	2
MBC	3550	Physiological Chemistry I.....	3
PHCL	3700	Pharmacology I.....	3
PHPR	3130	PPT-1	2
PHPR	3070	PPD-1	4
PHPR	3260	PHCAD-1	2
PHPR	3920	IPPE-1	1

Spring Semester

MBC	3320	Medicinal Chemistry II	2
MBC	3560	Physiological Chemistry II.....	3
MBC	3800	Microbiology & Immunology	3
MBC	3850	Microbiology & Immunology Lab	1
PHCL	3720	Pharmacology II.....	2
PHPR	3140	PPT-2	2
PHPR	3080	PPD-2	4
PHPR	3920	IPPE-1	1

P2 Year

Fall Semester

PHPR	4160	Pharmacokinetics	3
PHCL	4700	Pharmacology III	2
PHPR	4070	PPD-3	3
PHPR	4130	PPT-3	4
PHPR	4920	IPPE-2.....	1
		Undergraduate Professional Electives*	3

Spring Semester

MBC	4300	Medicinal Chemistry III.....	2
PHCL	4720	Pharmacology IV	2
PHPR	4330	Research Design & Drug Literature Eval I.....	2
PHPR	4080	PPD-4	3
PHPR	4140	PPT-4	4
PHPR	4520	PHCAD-2	2
PHPR	4920	IPPE-2.....	1

* A total of 3 credit hours of Undergraduate Professional Electives is required

Note: At the end of the P2 year, students are candidates for a B.S. degree in pharmaceutical sciences leading toward a Pharm.D. degree.

P3 Year

Summer Semester Immediately Following P2 Year

PHPR	6120	PPT-5	3
PHPR	6920	IPPE-3	1
Graduate Professional Electives*			2, 3 or 5

Fall Semester

MBC	5300	Molecular Basis of Cancer Chemotherapy	1
PHPR	5300	Design & Applications of Cancer Chemo.	1
PHPR	6070	PPD-5	3
PHPR	6130	PPT-6	4
PHPR	6160	Advanced Applied Pharmacokinetics.....	3
PHPR	6260	PHCAD-3	1
PHPR	6610	Seminar I.....	1
PHPR	6340	Research Design & Drug Literature Eval 2	2
PHPR	6920	IPPE-3	1
Graduate Professional Electives*			2-3

Spring Semester

MBC	6320	Neurological & Psychiatric Drugs	1
PHCL	6320	Neurological & Psychiatric Pharmacology	1
PHPR	6080	PPD-6	3
PHPR	6140	PPT-7	4
PHPR	6250	Self-care.....	4
PHPR	6280	PHCAD-4	2
PHPR	6310	Jurisprudence & Ethics	1
Graduate Professional Electives*			2-3

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

P4 Year

Fall Semester:

PHPR	8620	Seminar II (Fall or Spring)	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

Option of graduate elective (if not completed in P3)

By DL if not in PHPR 8620 Seminar II

Spring Semester

PHPR	8620	Seminar II (Fall or Spring)	2
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

Option of graduate elective (if not completed in P3)

By DL if not in PHPR 8620 Seminar II

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

Pharm.D. Undergraduate Professional Electives

The following is a list of recommended undergraduate professional electives. A total of 3 credit hours of undergraduate

professional electives is required. Other electives may be chosen with the written approval of the College of Pharmacy and Pharmaceutical Sciences Curriculum Committee. To count towards professional elective requirements, a grade of C or better must be earned in a course. Credit for courses taken outside The University of Toledo can be counted towards professional elective credit requirements if a grade of C or better is earned, but grades will not be factored into College of Pharmacy and Pharmaceutical Sciences or University of Toledo GPA calculations.

College of Pharmacy and Pharmaceutical Sciences:

Research with individual faculty (must be arranged before registering)

MBC	4910	Problems in Biomedical Chemistry	1-3
MBC	4900	Honors Seminar Med & Biol Chem,	1-3
MBC	4960	Honors Thesis Med & Biol Chem.	2-5
PHCL	4910	Problems in Pharmacology	1-3
PHCL	4900	Honors Seminar in Pharmacology.....	1-3
PHCL	4960	Honors Thesis in Pharmacology.....	2-5
PHPR	3670	Chemical Dependency & The Pharmacist.....	3
PHPR	4590	Readings Access & Cultural Competence.....	2
PHPR	4910	Pharmacy Practice Problems.....	1-5
PHPR	4900	Honors Seminar in Pharmacy Practice.....	1-3
PHPR	4960	Honors Thesis in Pharmacy Practice.....	2-5
PHCL	4730	Toxicology I.....	3
PHCL	4750	Toxicology II	3
PHCL	4630	Cancer Chemotherapy.....	3
MBC	4710	Targeted Drug Design.....	3

MBC 4710 is only for students seeking double B.S.P.S. major.

Others:

BIOL	3010	Molecular Genetics	3
BIOL	3210	Human Nutrition	3
BIOL	4110	Human Genetics	3
BIOL	4210	Molecular Basis of Disease.....	3
BUAD	2040	Financial Accounting Information	3
BUAD	2050	Accounting Business Decision Making	3
BUAD	3010	Principles of Marketing.....	3
BUAD	3030	Manage. & Behave. Processing Orgs.	3
BUAD	3040	Principles of Financial Management.....	3
BUAD	3470	Legal & Ethical Environment of Business	3
COUN	3140	Substance Abuse Prevention and Community Programming	3
HCAR	4510	Medical and Legal Aspects of Healthcare	3
HEAL	2800	Principles of Nutrition	3
HEAL	3300	Drug Awareness	3
HEAL	3600	Prevention and Control of Disease	3
HEAL	4100	Health Behavior	3
HEAL	4400	Health Problems of Youth.....	3
HEAL	4560	Health Problems of Aging	3
HEAL	4700	Nutritional Science	3
HEAL	4750	Obesity and Eating Disorders.....	3
MATH	2600	Introduction to Statistics	3
PHIL	3310	Science and Society	3
PHIL	3370	Medical Ethics	3
PSC	4330	Health Care Policy	3

Pharm.D. Professional Electives

The following is a list of recommended graduate professional electives. A total of 5 credit hours of graduate professional electives is required. Other electives may be chosen with the written approval of the College of Pharmacy and Pharmaceutical Sciences Curriculum Committee. A graduate course which significantly overlaps in content with a course used to fulfill the undergraduate professional elective requirement will not count towards fulfilling the graduate professional elective requirement. Credit for courses taken outside The University of Toledo can be counted towards professional elective credit requirements if a grade of C or better is earned, but grades will not be factored into College of Pharmacy and Pharmaceutical Sciences or University of Toledo GPA calculations.

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	5630	Cancer Chemotherapy.....	3
PHCL	5730	Toxicology I.....	3
PHCL	5750	Toxicology II	3
PHCL	5760	Toxicokinetics.....	3
PHCL	5990	Problems in Pharmacology	1 to 6
PHCL	6600	Seminar in Pharmacology	1
PHCL	6770	Toxicological Risk Assessment	3

PHPR

PHPR	5590	Readings Access & Cultural Competence.....	2
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	5810	Finance & Personal Planning for Pharmacists.	1
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	6670	Chemical Dependency & The Pharmacist.....	3
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	6950	Seminar in Industrial Pharmacy	1
PHPR	6980	Special Topics.....	1 to 5
PHPR	8540	Geriatric Monitoring Principles	3

Additional Recommendations

COMM	6260	Business Communication and Technology	3
COUN	6240	Diagnosis and Mental Health	4
COUN	6470/8470	Drugs and Mental Health Counseling	4
EDP	5210	Child Behavior and Development	3
EDP	5230	Adult Development	3
HEAL	5750	Obesity and Eating Disorders.....	3
HEAL	6530/8530	Drug Use and Misuse.....	3
MGMT	5110	Introduction to Management	3

NURS	528	Theories of Addictive Behavior	3
PSC	5330	Healthcare Policy	3
PSY	6600	Behavioral Neuroscience	3
PUBH	633	Public Health and Aging	3
SOC	5160	Health and Gender	3

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PHA	5239	Legal and Org Environ of Medicines Use	3
PHA	6935	Selected Topics in Pharmacy: Pharmaceutical Crimes Practice & Procedure ..	3
PHA	6935	Selected Topics in Pharmacy: Veterinary Pharmacy.....	2