PharmD 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 3930 IPPE-2 .............................................. 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-3 .............................................. 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 1 2
PHPR 4080 PPD-4 ............................................... 3
PHPR 4140 PPT-4 ............................................... 4
PHPR 4520 PHCAD-2 ......................................... 2
PHPR 4930 IPPE-4 .............................................. 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
- 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 Pharmacokinetics3
- PHPR 6260 PHCAD-3........................................... 1
- PHPR 6610 Seminar I........................................... 1
- PHPR 6340 Research Design & Drug Literature Eval 2 2
- PHPR 6920 IPPE-5.............................................. 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 8630 Longitudinal Drug Information (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 8630 Longitudinal Drug Information (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 CPPS 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 CPPS or University of Toledo GPA calculations.

CPPS:
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 Pharmacology1-3
PHCL 4960 Honors Thesis in Pharmacology 2-5
PHPR 3670 Chemical Dependency & The Pharmacist 3
PHPR 4590 Readings Access & Cultural Competence 2
PHPR 4640 Cosmetic Science Essentials ........3
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
PHCL 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 or 2640 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 CPPS 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 CPPS or University of Toledo GPA calculations.

### MBC

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<tr>
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<th>Credit Hours</th>
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<tr>
<td>MBC 5100/</td>
<td>Research Practices in Medicinal Chemistry</td>
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<td>7100</td>
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<td>MBC 5380</td>
<td>Medicinal &amp; Poisonous Plants</td>
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<td>MBC 5620/</td>
<td>Biochemical Techniques</td>
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<td>MBC 6100/</td>
<td>Advanced Immunology</td>
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<td>Nucleic Acid Chem/CHEM 6530/8530</td>
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<td>8750</td>
<td>Approaches to Enzymes</td>
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<td>MBC 6800/</td>
<td>Methods in Biotechnology</td>
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<tr>
<td>MBC 6980</td>
<td>Special Topics in Biological Chemistry</td>
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### PHCL

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<td>Cancer Chemotherapy</td>
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<td>PHCL 5730</td>
<td>Toxicology I</td>
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<td>PHCL 5750</td>
<td>Toxicology II</td>
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<td>PHCL 5760</td>
<td>Toxicokinetics</td>
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<td>PHCL 5990</td>
<td>Problems in Pharmacology</td>
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<td>PHCL 6600</td>
<td>Seminar in Pharmacology</td>
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<td>PHCL 6770</td>
<td>Toxicological Risk Assessment</td>
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### PHPR

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<td>PHPR 5690</td>
<td>Dosage Form Design</td>
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<td>Selected Topics in Pharmaceutical Techniques</td>
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<td>PHPR 5720</td>
<td>Pharmaceutical Rate Processes</td>
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<td>PHPR 5810</td>
<td>Finance &amp; Personal Planning for Pharmacists</td>
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PHPR 5870  Compounding Boot Camp ............ 2
PHPR 5990  Problems in Pharmacy Practice1 to 6
PHPR 6400  Advanced Pharmacotherapy............ 2
PHPR 6530  Research Methods in Pharmacy Practice  3
PHPR 6600  Seminar in Administrative Pharmacy  1
PHPR 6670  Chemical Dependency & The Pharmacist  3
PHPR 6700  Special Topics in Diabetes Care............2
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 6900  Seminar in Industrial Pharmacy .... 1
PHPR 6980  Special Topics..........................1 to 5
PHPR 8540  Geriatric Monitoring Principles .......3

PHM

PHM 6400  Physical and Mental Effects of
Psychoactive Substances......................2

Additional Recommendations

BUAD 6300  Strategic Marketing & Analysis....3
BUAD 6600  Supply Chain Management..........3
BUAD 6900  Senior Business Policy Forum .....3
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 5280  Theories of Addictive Behavior ...3
PSC 5330  Healthcare Policy ....................3
PSY 6600  Behavioral Neuroscience ...........3
PUBH 6330  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  Sel Topics in Pharmacy: Pharmaceutical
Crimes Practice & Procedure ..............3
PHA 6935  Selected Topics in Pharmacy:
Veterinary Pharmacy .......................2

Mercer College of Pharmacy

PHA 505  Community Pharmacy Ownership 2