

**Division of Medicinal Chemistry and Pharmacognosy  
College of Pharmacy, The Ohio State University**

**Natural Products Track  
Graduate Course Requirements**

*(updated 08/06/18)*

**Biochemistry:**

PHR 8320 – Biomedical Chemistry for Graduate Students (5 credits)

**Chemistry:**

PHR 7370 – Advanced Pharmaceutical Analysis (2 credits) **or**

CHEM 5420 – Spectroscopy of Organic Compounds (1.5 credits)

CHEM 6410 – Synthesis I (1.5 credits) **or**

CHEM 7150 – Mass spectrometry (3)

**Medicinal Chemistry:**

PHR 7893 – Phytochemical Analysis of Natural Products (2 credits)\*\* **or**

PHR 7891 – Chromatographic Methods (2 credits)\*\*

PHR 8390 – Recent Advances in Pharmacognosy (2 credits)

PHR 8510 – Advanced Pharmacognosy (2 credits) **or**

MICRO/PHR 5270 – Antibiotics and Microbial Natural Products (3 credits)

PHR 7350 – Drug Discovery and Drug Design (2 credits)

**Two electives from the following\*:**

-PHR 7351 – Special Topics in Medicinal Chemistry (2 credits)

-BIOCHEM 6762 – Advanced Biochemistry: Enzymes (1.5)

-BIOCHEM 6764 – Advanced Biochemistry: Metabolism (1.5)

-CHEM 5450 – Practical NMR Spectroscopy (1)

-CHEM 8499 – Advanced Topics in Organic Chemistry (credits 1.5-3 credits)

-MICRO 5161 – Bioinformatics and Molecular Microbiology (3)

-MICRO 6020 – Microbial Physiology and Biochemistry (3)

-MICRO 6080 – Advanced Microbial Genetics (3)

\*Also includes Biochem/Molecular Biology/Grant Writing courses suggested by faculty advisor based on research focus (*with approval*)

\*\*PHR 7891 or 7893 could be counted as an elective if both are taken

**Note:** The courses listed above are in addition to the course requirements common to all graduate students in the Division of Medicinal Chemistry and Pharmacognosy, namely PHR 8520 (Research Ethics) and PHR 8880/8881 (College and Division Seminars). One enrollment in 8880 or 8881 is required per semester while on campus (with three 8880.01 or 8881.01 enrollments prior to graduation).