

The Ohio State University  
College of Pharmacy

Pharmaceutical Sciences Minor

Undergraduate Advising  
College of Pharmacy 150  
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Website: <https://pharmacy.osu.edu/education/undergraduate-programs/pharmaceutical-sciences-minor>

**About the Minor**

The Pharmaceutical Sciences minor offers unique training for students pursuing careers in health care and the pharmaceutical industry. Flexible in design, this minor permits students from both science and non-science disciplines to learn about drug science in a variety of contexts.

**Minor Requirements**

The minor in Pharmaceutical Sciences requires a minimum of 12 credit hours. All students must take PHR2500. Students must fulfill the remaining 9 hours from a list of Pharmacy courses, including at least one designated contemporary issues course. (The contemporary issues will be designated with an \*.) Students should meet with the College of Pharmacy's undergraduate advisors to customize a program.

**Required: 3 hours**

PHR2500 Drug Discovery, Development, and Delivery

**Electives: at least 9 hours**

Students must take courses from the following list to bring total hours to 12, including at least 1 contemporary issues course (designated by \*). Note: some of these courses have prerequisites that would need to be fulfilled prior to enrollment.

PHR 2010\* Pharmacology: How Drugs Work (3 CH)  
PHR 2100 Career Develop in the Pharm Sciences I (0.5 CH)  
PHR 2101 Career Develop in the Pharm Sciences II (0.5 CH)  
PHR 2367.01 & 2367.02 Drug Use in American Culture (3 CH)  
PHR 2400\* Addicting Drugs (3 CH)  
PHR 2410\* Drugstore Science (3 CH)  
PHR 2420\* – Drug Culture and Genetics: From Otzi to Ozzy (3 CH)  
PHR 2510/2511H\* Introduction to Pharmacy (2/3 CH)  
PHR 2520\* Patient Perspectives (2 CH)  
PHR 2530/2530E\* Intro to Pharm Sci Research (2 CH)  
PHR 3400\* Therapeutic Frontiers (2 CH)  
PHR 3420\* Gen Rx: America's Drug-Taking Culture (3 CH)  
PHR 3430- Quest for the Cure (3 CH)  
PHR 3440\* Drugs That Changed The World (3 CH)  
PHR 3500\* Pharmacoethics: Dilemmas & Decision-Making (2 CH)  
PHR 3520\* Principles of Therapeutics (2 CH)  
PHR 3530 Drugs, Human Enhancement & the Mastery of Nature (3 CH)  
PHR 3540\* Health Citizenship: Advocacy & Change-making (3 CH)  
PHR 3708\* Vaccines: A Global History (3 CH)  
PHR 4000\* Molecules to Medicines I (5 CH)  
PHR 4010\* Molecules to Medicines II (5 CH)  
PHR 4193 Individual Studies in Pharm Sciences (Var)  
PHR 4210H Prob Solving in Biomedical Chemistry (2 CH)  
PHR 4330 Basic Pharmacokinetics (2 CH)

PHR 4402 Pharmacoeconomics: Measuring the Value of Pharmaceutical Interventions (3 CH)  
PHR 4420\* Molecular Pharmacology (2 CH)  
PHR 4430 GPCR Pharmacology (2 CH)  
PHR 4440\* Pharmacology of Neurological & Psychiatric Disorders (3 CH)  
PHR 4470\* Contemporary Pharmacology (1 CH)  
PHR 4600 Pharmaceutical Sciences Laboratory (2 CH)  
PHR 4610 Experimental Techniques in Drug Discovery (3 CH)  
PHR 4998 General Undergraduate Research (Var)  
PHR 5010 Fundamentals of Pharmacology (3 CH)  
PHR 5410\* Vaccine Hesitancy: Towards Effective Communication (3 CH)  
PHR 5540\* Intro to Clinical & Translational Pharmacy Research (2 CH)  
PHR 5550\* Topics in International Pharmacy (2 cr hrs)  
PHR 5560 Success and Leadership in Pharmacy (1.5 CH)  
PHR 5590 Chemical Dependency & the Healthcare Professional (3 CH)

**Pharmaceutical Sciences minor program guidelines:**

Credit hours required: A minimum of 12 CH. 1000-level courses shall not be counted in the minor. At least 6 credit hours must be upper-level courses as defined by the College of Pharmacy (3000 level or above).

Transfer and EM credit hours allowed: A student is permitted to count up to 6 total hours of transfer credit and/or credit by examination.

Overlap with the GE: A student is permitted to overlap up to 6 credit hours between the GE and the minor.

Overlap with the major and additional minor(s):

The minor must be in a different subject than the major. The minor must contain a minimum of 12 hours distinct from the major and/or additional minor(s).

Grades required:

Minimum C- for a course to be listed on the minor  
Minimum 2.00 cumulative GPA for all minor course work.  
Course work graded Pass/Non-Pass cannot count on the minor  
No more than 3 credit hours of course work graded Satisfactory/Unsatisfactory may count toward the minor

X193 credits: No more than 3 credit hours

Minor approval: The minor must be approved by the academic unit at least by the time the graduation application is submitted. Please fill out the [Pharmacy Minor form](#) on the website to declare the minor or request an appointment to review minor requirements.

Changing the minor: Once the minor program is filed in the college office, any changes must be approved by the College of Pharmacy. Please see an undergraduate advisor for approval.

College of Arts and Sciences Curriculum  
and Assessment Services  
306 Dulles Hall, 230 Annie and John Glenn Ave.  
<http://artsandsciences.osu.edu>

Approved CAA 2-3-16  
Updated 1-16-20DH  
Updated 4-10-20DH  
Updated 9-10-20  
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Updated 2-4-21 DH  
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Updated 6-9-21 DH  
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