PHARMACOLOGY AND TOXICOLOGY, BS

Pharmacology and Toxicology (PharmTox) is an undergraduate major offered by the School of Pharmacy, leading to a Bachelor of Science in Pharmacology and Toxicology. This major covers two related biomedical sciences:

- **Pharmacology:** The study of drug actions, including their sites, properties, effects, and mechanisms.
- **Toxicology:** The study of harmful effects of chemicals on humans and animals, including exposure assessment, hazard identification, dose response, and risk characterization.

Both fields integrate various scientific disciplines and use advanced biotechnological methods to understand drug and toxicant actions at the molecular level. The curriculum is multidisciplinary, spanning several biomedical sciences. This major can prepare students for a variety of future careers and paths, including graduate school in the biomedical sciences, health professions like medical or dental school, or to work in the biotech or pharmaceutical industry.

The PharmTox major is a limited enrollment, selective admission major. An application is required along with prerequisite courses - for details, see How to Get In (p. 1). Pre-PharmTox students are usually enrolled in the College of Letters & Science or the College of Agricultural and Life Sciences during their first two years. Students should stay in contact with the PharmTox advisor to keep up with admission requirements and program updates. Once admitted, the core curriculum takes two years to complete (typically junior and senior years).

For those interested in becoming pharmacists, information about the Doctor of Pharmacy (PharmD) program is available here: https://pharmacy.wisc.edu/programs/pharmd/. The PharmD is required to take the North American Pharmacist Licensure Examination (NAPLEX) and become a registered and licensed pharmacist.

HOW TO GET IN

HOW TO GET IN

Requirements	Details
How to get in	Application required. Meeting the requirements listed below does not guarantee admission. (https://pharmacy.wisc.edu/academics/pharm-tox/admissions (https://pharmacy.wisc.edu/academics/pharm-tox/admissions/)/)
Courses required to get in	Students must complete the following by the end of the summer semester prior to entering the program. Calculus I (one of) • MATH 221 • MATH 171 and MATH 217 General Chemistry (one of) • CHEM 103 and CHEM 104 • CHEM 109 • CHEM 115 Organic Chemistry • CHEM 343 • CHEM 345 • CHEM 344 Introductory Biology (one of) • BIOLOGY/BOTANY/ZOOLOGY 151 and BIOLOGY/BOTANY/ZOOLOGY 152 • BIOLOGY/ZOOLOGY 101, BIOLOGY/ZOOLOGY 102, and BIOLOGY/BOTANY 130 • BIOCORE 381, BIOCORE 382, BIOCORE 383, and BIOCORE 384 Communication A Social Science • Any Social Sciences (S) or Humanities or Social Sciences (Z) (3 credits)
GPA requirements to get in	None.
Credits required to get in	60 credits must be completed by the end of the summer semester prior to entering the program. AP, IB, retrocredits, and credit-granting transfer coursework from other institutions (including coursework completed while in high school) count.
Other	None.

Semester	Deadline to apply	Decision notification timeline
To apply for a fall start	Early February	End of March
To apply for a spring start	This program does not accept applications to start in the spring.	

To apply for a summer start	This program does not accept applications to start in the summer.

PROSPECTIVE TRANSFER APPLICANTS

Transfer students apply separately for admission to both the University of Wisconsin-Madison and the Pharmacology and Toxicology program during the spring term for fall enrollment. Information for prospective transfer students can be found on the School of Pharmacy Information for Transfer Students (https://pharmacy.wisc.edu/academics/pharm-tox/admissions/transfers/) page.

REQUIREMENTS

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin-Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (https://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext) section of the Guide.

General Education	• Breadth—Humanities/Literature/Arts: 6 credits • Breadth—Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits • Breadth—Social Studies: 3 credits • Communication Part A & Part B * • Ethnic Studies * • Quantitative Reasoning Part A & Part B *

* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

OVERVIEW OF REQUIREMENTS

The Pharmacology and Toxicology BS degree requires the following groups of coursework:

- University general education requirements (above - those that are also prerequisite requirements will be completed before entering the program; remaining gen ed requirements can be completed at any time prior to graduation)
- Prerequisite requirements (completed prior to admittance/entrance to the program)
- Pharmacology and Toxicology major requirements (mostly completed after entering the program, though some courses can be completed earlier)

The PharmTox degree does not require any additional breadth courses beyond the university general education requirements. World language coursework can count towards the "Humanities/Literature/Arts" gen ed requirement.

School of Pharmacy academic policies (regarding matters such as academic and professional conduct, academic progress/probation, honor roll, pass/fail registration, and independent study coursework) are found in the PharmTox student policy handbook (https://students.pharmacy.wisc.edu/pharm-tox-handbook/).

PREREQUISITES

CALCULUS I

Code	Title	Credits
Select one of the following options: [1]		
MATH 221	Calculus and Analytic Geometry 1	5
MATH 171 & MATH 217	Calculus with Algebra and Trigonometry I and Calculus with Algebra and Trigonometry II	10

[1] MATH 211 Survey of Calculus 1 taken at UW-Madison does not fulfill the Calculus I requirement for this major.

GENERAL AND ORGANIC CHEMISTRY

Code	Title	Credits
Complete one of the following general chemistry options:		
CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II	9
CHEM 109	Advanced General Chemistry	5
CHEM 115	Chemical Principles I	5
Complete all of the following organic chemistry courses:		
CHEM 343	Organic Chemistry I	3
CHEM 345	Organic Chemistry II	3
CHEM 344	Introductory Organic Chemistry Laboratory	2

INTRODUCTORY BIOLOGY

Code	Title	Credits
Complete one of the following options:		
BIOLOGY/BOTANY/ZOOLOGY 151 & BIOLOGY/BOTANY/ZOOLOGY 152	Introductory Biology and Introductory Biology	10
BIOLOGY/ZOOLOGY 101 & BIOLOGY/ZOOLOGY 102 & BOTANY/BIOLOGY 130	Animal Biology and Animal Biology Laboratory and General Botany	10
BIOCORE 381 & BIOCORE 382 & BIOCORE 383 & BIOCORE 384	Evolution, Ecology, and Genetics and Evolution, Ecology, and Genetics Laboratory and Cellular Biology and Cellular Biology Laboratory	10

COMMUNICATION

The UW–Madison communication A requirement must be fulfilled.

SOCIAL SCIENCE

Any course that qualifies as social science (S or Z) credit, 3 credits required.

OTHER COLLEGE COURSES

Sixty (60) credits must be completed by the end of the summer semester prior to entering the program. AP, IB, retrocredits, and credit-granting transfer coursework from other institutions (including coursework completed while in high school) all count toward the 60 credits.

PHARMACOLOGY AND TOXICOLOGY MAJOR REQUIREMENTS

Students must take most of their major-level coursework in very specific semesters in order to graduate within four semesters of starting the program, due to prerequisites and fall or spring-only courses - see four year plans (p. 5) for course sequences. It may be possible to take some major-level courses earlier if prerequisites are met; consult the advisor. The five credits of elective coursework, statistics, genetics, and physics requirements can be completed at any time, including prior to admission to the program. The directed/independent study requirement must be performed after matriculation into the program (i.e. the first fall semester officially declared in the major or any semester thereafter).

DIRECTED/INDEPENDENT STUDY (699), 2 CREDITS

Must be completed after matriculation into the major (i.e. the first fall semester officially declared in the major or any semester thereafter) and have prior approval to meet PharmTox major requirements. Students should not wait until the final semester to try to fulfill this requirement, as it can be difficult to find a research opportunity close to graduation. The research-based directed/independent study (typically a course numbered 699) must be in a biological, chemical, or biomedical sciences department, and can include laboratory-based research, library or literature-based research, or clinical research. Experiences such as peer mentoring or teaching assistance, even if a 699 course is used for credit, cannot fulfill this requirement.

PHYSICS I AND II

Code	Title	Credits
Complete one of the following sequences: (consult with advisor on recommended sequences):		
PHYSICS 103 & PHYSICS 104	General Physics and General Physics	8
PHYSICS 201 & PHYSICS 202	General Physics and General Physics	10
PHYSICS 207 & PHYSICS 208	General Physics and General Physics	10

STATISTICS

Code	Title	Credits
Complete one of the following:		
STAT 240	Data Science Modeling I	4
STAT 301	Introduction to Statistical Methods	3
STAT 371	Introductory Applied Statistics for the Life Sciences (recommended)	3
STAT 324	Introduction to Statistics for Science and Engineering	3
STAT/B M I 541	Introduction to Biostatistics	3

BIOCHEMISTRY

Code	Title	Credits
BIOCHEM 507 & BIOCHEM 508	General Biochemistry I and General Biochemistry II	6

PHYSIOLOGY

Code	Title	Credits
Complete one of the following:		
ANAT&PHY 335	Physiology	5
BIOCORE 485 & BIOCORE 486	Principles of Physiology and Principles of Physiology Laboratory	5

GENETICS

Code	Title	Credits
Complete one of the following:		
GENETICS 466	Principles of Genetics	3
GENETICS 467 & GENETICS 468	General Genetics 1 and General Genetics 2 [1]	6
BIOCORE 381 & BIOCORE 382 & BIOCORE 383 & BIOCORE 384	Evolution, Ecology, and Genetics and Evolution, Ecology, and Genetics Laboratory and Cellular Biology and Cellular Biology Laboratory [2]	10

[1] If students choose GENETICS 467 & GENETICS 468, 3 credits from this sequence will count towards the 5 required elective credits.

[2] Students who have taken BIOCORE for introductory biology will have typically also completed the genetics requirement via BIOCORE courses taken sophomore/second year.

PATHOLOGY

Code	Title	Credits
PATH 404	Pathophysiologic Principles of Human Diseases	3

PHARMACOLOGY AND TOXICOLOGY CORE

Code	Title	Credits
Complete all of the following:		
PHM SCI 558	Laboratory Techniques in Pharmacology and Toxicology	2
PHM SCI 679	Pharmacology and Toxicology Seminar (taken twice) [1]	1
PHM SCI 510	Pharmacology Principles and Applications	2
PHM SCI/ M&ENVTOX/ ONCOLOGY/ PHMCOL-M/ POP HLTH 625	Toxicology I	3

PHM SCI/ M&ENVTOX/PATH/ PHMCOL-M/ POP HLTH 626	Toxicology II	3

[1] Students need to take PHM SCI 679 in both their first and second years in the major in spring semesters (typically junior and senior years); the course is repeatable for degree credit.

ADDITIONAL PHARMACOLOGY

Code	Title	Credits
Complete one of the following:		
BIOCHEM/ NUTR SCI 560	Principles of Human Disease and Biotechnology	2
BOTANY 575	Special Topics (Topic: Medical Botany)	3
PATH-BIO 307	Superbugs, Sex, & Drugs: Why Modern Medicine Needs Evolutionary Biology	2
PHM SCI 581	Molecular and Cellular Principles in Pharmacology	4
PHM SCI 680	Principles of Pharmaceutical Sciences	3

ELECTIVES IN THE MAJOR

Students must complete at least 5 elective credits in the Pharmacology and Toxicology major from the below list, in any subject. Another option for fulfilling a portion or all of these 5 credits are additional directed/ independent study (699) credits beyond the minimum 2 credits required for the major. Additional 699 credits must be approved by the PharmTox program to count towards the elective requirement if they are not done under the same principle investigator that was approved for the original two credits required.

Code	Title	Credits
ANAT&PHY 337	Human Anatomy	3
ANAT&PHY 338	Human Anatomy Laboratory	2
AN SCI/DY SCI 434	Reproductive Physiology	3
BIOCHEM/ NUTR SCI 510	Nutritional Biochemistry and Metabolism	3
BIOCHEM 551	Biochemical Methods	4
BIOCHEM/ M M & I 575	Biology of Viruses	2
BIOCHEM 601	Protein and Enzyme Structure and Function	2
BIOCHEM/ GENETICS/ MICROBIO 612	Prokaryotic Molecular Biology	3
BIOCORE 587	Biological Interactions	3
BOTANY/AMER IND/ ANTHRO 474	Ethnobotany	3-4
CHEM 547	Advanced Organic Chemistry	3
CHEM 561	Physical Chemistry I	3
CHEM 562	Physical Chemistry II	3
CHEM 563	Physical Chemistry Laboratory I	1
CHEM 564	Physical Chemistry Laboratory II	1
CHEM 665	Biophysical Chemistry	3
DERM 601	Skin Biology and Skin Diseases	3
ENVIR ST/ POP HLTH 471	Introduction to Environmental Health	3
ENVIR ST/ POP HLTH 502	Air Pollution and Human Health	3
FOOD SCI 550	Fermented Foods and Beverages	2
GENETICS 545	Genetics Laboratory	2
GENETICS 588	Immunogenetics	3
GENETICS/ MD GENET 662	Cancer Genetics	3
M M & I 301	Pathogenic Bacteriology	2
M M & I 341	Immunology	3
M M & I/PATH-BIO 528	Immunology	3
MED PHYS/ H ONCOL 410	Radiobiology	2-3
MICROBIO 303	Biology of Microorganisms	3
MICROBIO 304	Biology of Microorganisms Laboratory	2
MICROBIO 305	Critical Analyses in Microbiology	1
MICROBIO 357	General Bioinformatics for Microbiologists	3
MICROBIO 626	Microbial and Cellular Metabolomics	3
M&ENVTOX/ CIV ENGR/ SOIL SCI 631	Toxicants in the Environment: Sources, Distribution, Fate, & Effects	3
ONCOLOGY 401	Introduction to Experimental Oncology	2
ONCOLOGY/ M M & I/ PL PATH 640	General Virology-Multiplication of Viruses	3
PHARMACY 632	Neuroscience of Psychedelics	3
PHM SCI/B M E 430	Biological Interactions with Materials	3
PSYCH 450	Primate Psychology: Insights into Human Behavior	3-4
PSYCH 454	Behavioral Neuroscience	3-4
PSYCH/ ZOOLOGY 523	Neurobiology	3
SOC WORK 453	Substance Use Disorders	3
ZOOLOGY 425	Behavioral Ecology	3
ZOOLOGY 430	Comparative Anatomy of Vertebrates	5
ZOOLOGY 470	Introduction to Animal Development	3
ZOOLOGY 555	Laboratory in Developmental Biology	3
ZOOLOGY 570	Cell Biology	3

QUALITY OF WORK REQUIREMENTS AND PASS/FAIL

Students must have a 2.000 cumulative grade point average at the time of graduation in order to earn a Pharmacology and Toxicology BS degree.

No course that is used for Pharmacology and Toxicology degree requirements may be taken as pass/fail and must be taken for a letter grade (AP, IB, or other test credits or placement exemptions are excluded

from this requirement). This includes all prerequisite coursework, major requirements, and university general education requirements.

UNIVERSITY DEGREE REQUIREMENTS

Total Degree	To receive a bachelor's degree from UW–Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.
Residency	Degree candidates are required to earn a minimum of 30 credits in residence at UW–Madison. "In residence" means on the UW–Madison campus with an undergraduate degree classification. "In residence" credit also includes UW–Madison courses offered in distance or online formats and credits earned in UW–Madison Study Abroad/Study Away programs.
Quality of Work	Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.

LEARNING OUTCOMES

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1. Demonstrate a knowledge and understanding of the supportive biomedical fields.
2. Demonstrate a knowledge and understanding of Pharmacology.
3. Demonstrate a knowledge and understanding of Toxicology.
4. Understand scientific principles of laboratory design and presentation of scientific data.

FOUR-YEAR PLAN

FOUR-YEAR PLAN

A minimum of 120 credits is required to earn the BS in Pharmacology and Toxicology. Below are sample four-year plans for the Pharmacology and Toxicology major, incorporating both prerequisites and major coursework. They focus on science coursework sequencing and do not take into account factors such as AP or advance standing credits, additional summer courses, study abroad, or preparing for standardized tests like the MCAT or PCAT.

It is **critical** that you talk with your advisor about your tentative plan for course sequences and prerequisites, which courses are offered fall vs. spring vs. summer, etc.

EXAMPLE PLAN: CHEMISTRY 103/104

First Year

Fall	Credits	Spring	Credits
CHEM 103	4	CHEM 104	5
MATH 221	5	STAT 371 or 301	3
Communication A	3	Social Science	3-4
Electives	3-4	Electives	3-4
	15-16		**14-16**

Second Year

Fall	Credits	Spring	Credits
CHEM 343	3	CHEM 345	3
BIOLOGY/BOTANY/ ZOOLOGY 151 (or Biocore)	5	CHEM 344	2
Ethnic Studies	3-4	BIOLOGY/BOTANY/ ZOOLOGY 152 (or Biocore)	5
Electives	3	Humanities	3
		Electives	3
	14-15		**16**

Third Year

Fall	Credits	Spring	Credits
BIOCHEM 507	3	BIOCHEM 508	3
PHM SCI 558	2	PATH 404	3
ANAT&PHY 335 (or Biocore)	5	PHM SCI 679	1
Humanities	3	PHYSICS 103	4
Research (699) credits	2-3	Electives in the Major or add'l research credits	2-3
	15-16		**13-14**

Fourth Year

Fall	Credits	Spring	Credits
PHM SCI/M&ENVTOX/ ONCOLOGY/PHMCOL-M/POP HLTH 625	3	PHM SCI/M&ENVTOX/ PATH/PHMCOL-M/ POP HLTH 626	3
PHYSICS 104	4	PHM SCI 679	1
Additional Pharmacology	2-4	GENETICS 466 (not req. if Biocore taken)	3
Electives in the Major or add'l research credits	2-3	PHM SCI 510	2
Electives	3	Electives	4
	14-17		**13**

Total Credits 114-123

EXAMPLE PLAN: CHEMISTRY 109, BIOLOGY IN FIRST YEAR

First Year

Fall	Credits	Spring	Credits
CHEM 109	5	CHEM 343	3
MATH 221	5	ZOOLOGY/BIOLOGY/ BOTANY 151	5
Communication A	3	Social Science	3-4
Electives	3-4	Electives	3-4
	16-17		**14-16**

Second Year

Fall	Credits	Spring	Credits
ZOOLOGY/BIOLOGY/ BOTANY 152	5	CHEM 344	2
CHEM 345	3	PHYSICS 103	4
Ethnic Studies	3-4	Humanities	3-4

Humanities	3-4	Electives	3-4
	14-16		**12-14**

Third Year

Fall	Credits	Spring	Credits
BIOCHEM 507	3	BIOCHEM 508	3
PHM SCI 558	2	PATH 404	3
ANAT&PHY 335	5	PHM SCI 679	1
Research (699) credits	2	PHM SCI 510	2
Electives	3	Electives in the Major or add'l research credits	2-3
	15		**11-12**

Fourth Year

Fall	Credits	Spring	Credits
PHM SCI/M&ENVTOX/ ONCOLOGY/PHMCOL-M/POP HLTH 625	3	PHM SCI/M&ENVTOX/ PATH/PHMCOL-M/ POP HLTH 626	3
STAT 371	3	PHM SCI 679	1
PHYSICS 104	4	GENETICS 466	3
Electives in the Major or add'l research credits	2-3	Additional Pharmacology	2-4
Electives	3	Electives	3-4
	15-16		**12-15**

Total Credits 109-121

EXAMPLE PLAN: CHEMISTRY 103 IN SPRING OF FIRST YEAR

First Year

Fall	Credits	Spring	Credits
MATH 112	3	CHEM 103	4
Social Science	3-4	MATH 221	5
Communication A	3	Humanities	3-4
Electives	3-4	Electives	3-4
	12-14		**15-17**

Second Year

Fall	Credits	Spring	Credits	Summer	Credits
CHEM 104	5	CHEM 343	3	CHEM 345	3
ZOOLOGY/ BIOLOGY/ BOTANY 151	5	ZOOLOGY/ BIOLOGY/ BOTANY 152	5	CHEM 344	2
Ethnic Studies	3-4	Humanities	3-4		
Electives	3-4	Electives in the Major	3		
	16-18		**14-15**		**5**

Third Year

Fall	Credits	Spring	Credits
BIOCHEM 507	3	BIOCHEM 508	3-4
PHM SCI 558	2	PATH 404	3
ANAT&PHY 335	5	PHM SCI 679	1
STAT 371 or 301	3	PHYSICS 103	4
		Research (699) credits	2
	13		**13-14**

Fourth Year

Fall	Credits	Spring	Credits
PHM SCI/ M&ENVTOX/ ONCOLOGY/ PHMCOL-M/ POP HLTH 625	3	PHM SCI/ M&ENVTOX/ PATH/ PHMCOL-M/ POP HLTH 626	3
PHYSICS 104	4	PHM SCI 679	1
Additional Pharmacology	2-4	PHM SCI 510	2
Electives in the Major or add'l research credits	2-3	GENETICS 466	3
		Electives	3
	11-14		**12**

Total Credits 111-122

THREE-YEAR PLAN

THREE-YEAR PLAN

Below is a sample 3 year plan for the Pharmacology and Toxicology major, incorporating prerequisites, major coursework, and university-wide breadth and general education requirements. Students interested in graduating in three years should meet with the PharmTox academic advisor early and often to discuss feasibility, appropriate course sequencing, post-graduation plans (careers, graduate school, etc.), and other considerations.

While there are many advantages to attending four years of college, including making the most of research and study abroad opportunities, exploring alternative majors, completing additional majors and certificates, developing skills and interests through student groups, and personal growth, students may have various reasons for wanting to graduate in three years, and the PharmTox advisor will work with students to help them prioritize their goals.

This example plan assumes that students will:

- Enter their first year at UW-Madison with at least 25 advanced standing credits (to be able to meet the PharmTox application prerequisite of 60 credits by the start of their second year), including equivalency credit for Introductory Biology (ZOOLOGY/BIOLOGY/ BOTANY 151) . Entering with fewer credits would require more credits in the fall, spring, and/or summer terms in the first year than in the example plan.
- Place into or are eligible to enroll in MATH 221 for first semester.
- Apply to the PharmTox major during their first year for admission for fall of their second year and have all prerequisite coursework complete by the end of the summer term after the first year.
- Enroll in enough credits each term to earn 120 total credits. Some terms may require more or less credits than the example plan, depending on the number of advanced standing credits a student brings in.

Summer coursework will be required after the first year for students without chemistry advanced standing credits, in order to complete general and organic chemistry before the start of the second year. Other summer

coursework is not necessarily required, but may be helpful to alleviate credit loads and course combinations in fall or spring terms.

First Year

Fall	Credits	Spring	Credits	Summer	Credits
MATH 221	5	CHEM 343	3	CHEM 345	3
CHEM 109	5	ZOOLOGY/ BIOLOGY/ BOTANY 152	5	CHEM 344	2
Communication A	3	Social Science	3-4		
Humanities	3-4	Ethnic Studies	3-4		
	16-17		**14-16**		**5**

Second Year

Fall	Credits	Spring	Credits
BIOCHEM 507	3	BIOCHEM 508	3-4
ANAT&PHY 335	5	PATH 404	3
PHM SCI 558	2	PHM SCI 679	1
STAT 371 or 301	3	PHYSICS 103	4
Research (699) credits	2	Electives in the Major or add'l research credits	2-3
	15		**13-15**

Third Year

Fall	Credits	Spring	Credits
PHM SCI/ M&ENVTOX/ ONCOLOGY/ PHMCOL-M/ POP HLTH 625	3	PHM SCI/ M&ENVTOX/ PATH/ PHMCOL-M/ POP HLTH 626	3
PHYSICS 104	4	PHM SCI 679	1
Additional Pharmacology	2-4	PHM SCI 510	2
Humanities	3-4	GENETICS 466	3
		Electives in the Major or add'l research credits	2-3
		Electives	3
	12-15		**14-15**

Total Credits 89-98

ADVISING AND CAREERS

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ADVISING

During their first two college years, pre-PharmTox students are typically in the College of Letters & Science or the College of Agricultural and Life Sciences. This time is spent completing prerequisite courses and preparing to apply to the PharmTox major. Students can request to be assigned to the PharmTox advisor in addition to their primary academic advisor from their current school. They are welcome to meet with the PharmTox advisor at any time for guidance. There is no official "pre-PharmTox" designation or program to declare or be in administratively.

The PharmTox advisor supports both current undergraduates and prospective high school or transfer students interested in the major. High school and transfer students can schedule appointments by calling (608) 262-6234 or emailing the advisor, while current UW-Madison students can book their sessions online via Starfish (https://wisc.starfishsolutions.com/starfish-ops/). Advising is also available during SOAR for incoming students, which includes help with curriculum planning and introductions to enrollment tools. The advisor can also connect prospective undergraduates with upperclassmen and alumni who share similar interests.

Once admitted to the major, students will have the PharmTox advisor as their primary academic advisor, ensuring they receive continuous support throughout their academic journey.

CAREERS

Graduates of the program are well-prepared for entry-level scientific jobs in various industries like biotechnology, consumer products, contract research, regulatory affairs, and pharmaceuticals. They can also work in academic research labs or government agencies focused on science, health, or the environment. The program provides a strong foundation for graduate education in pharmacology, toxicology, or other biomedical sciences, as well as for health professions like medical, veterinary, dental, optometry, and public health programs. With the right general education and elective courses, students can also pursue careers in scientific writing, business, regulatory roles, environmental positions, or law school. Graduates are equipped to make significant contributions to human and animal health.

The program has strong connections with its 400+ alumni who are located across the country and the globe. The PharmTox advisor can help students connect with alumni to explore careers and learn about employers.

Available Career Resources

- The PharmTox advisor can assist with resume building, interview preparation, and career exploration, and also gives all PharmTox students access to a virtual career center via Canvas.
- Many L&S and CALS career workshops and fairs are open to all students, including PharmTox students. The Career Exploration Center (https://cec.ccas.wisc.edu/) (CEC) is also available to students who are in the early stages of career exploration, especially those who have lots of ideas or no ideas yet.
- Current students can join the Pharmacology and Toxicology LinkedIn group (https://www.linkedin.com/groups/12266662/) to network with fellow students and alumni.
- Handshake (https://app.joinhandshake.com/auth/?auth=648) features employer job postings specifically available to UW–Madison students and is a great place to browse for internships and full-time jobs. Students can also post resumes and allow employers to contact them regarding potential employment.
- The Center for Prehealth Advising (http://www.prehealth.wisc.edu) assists students with preparing for and applying to professional healthcare programs, including medicine, physical therapy, physician assistant, dentistry, and more.

WISCONSIN EXPERIENCE

WISCONSIN EXPERIENCE

The following opportunities can help students connect with other students interested in pharmacology, toxicology, and other biomedical sciences, build relationships with faculty and staff, and contribute to out-of-classroom learning:

- The program's small size and cohort-based model makes it easy to arrange study groups, tutoring, and social events, and funds can be requested to support these activities.
- Students have access to a student commons, group study rooms, lockers, and a variety of gathering spaces in Rennebohm Hall. Ebling Library, located adjacent to Rennebohm Hall in the Health Sciences Learning Center, serves the School of Pharmacy student body, in addition to that of students from medicine, veterinary medicine, and nursing.
- The School of Pharmacy hosts a variety of student organizations (https://pharmacy.wisc.edu/student-organizations/), several of which are available to PharmTox students. Junior and senior class presidents are elected each year and represent each cohort by providing feedback, as well as serve on various School of Pharmacy committees to represent the PharmTox program.
- Students are required to participate in a scientific research experience for at least one semester after being admitted to the major, though continued research involvement before and after admission to the major is highly encouraged. The Biocommons website (http://biology.wisc.edu/finding-mentor/) has step-by-step information on how to find a research opportunity, and students can also speak with the advisor for additional guidance.
- Study abroad is definitely possible, although a winter session, spring break, or summer session experience fits most easily with the PharmTox curriculum. Visit the Study Abroad Major Advising Page for PharmTox (https://studyabroad.wisc.edu/academics/major-advising-pages-maps/pharmacology-and-toxicology/) to learn more.
- One to two travel awards are given annually to allow seniors to attend a national conference in the field of pharmacology and toxicology, and funding is often available to facilitate travel for interested students to regional conferences near Madison.
- The annual PharmD/PharmTox Research Symposium provides students with an opportunity to present their research projects each spring.