

COLLEGE OF PHARMACY

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Honors Student Advisers

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William S. Messer
Walter W. Siganga
Katherine A. Wall

Professional Division Students

Assigned faculty

Professional Division: Out-of-Sequence Students

Christine N. Hinko

Fifth Year Students

Barbara M. Rudnicki

COLLEGE OF PHARMACY

Accreditation

The College of Pharmacy holds membership in the American Association of Colleges of Pharmacy, is recognized as an institution in good standing by the Ohio State Board of Pharmacy and is accredited by the American Council on Pharmaceutical Education (ACPE).

Programs in Pharmacy and the Pharmaceutical Sciences

The College of Pharmacy prepares students for careers in both the pharmaceutical sciences and the profession of pharmacy. Those who do not seek professional licensure may work in the medical, legal and biomedical professions. Those who enter the profession provide direct patient care services.

Pharmacy Licensure Program – Doctor of Pharmacy

All students seeking a degree that will lead to pharmacy licensure will need to complete two years of course work in the preprofessional division of the College of Pharmacy. Following the completion of a core set of required courses, students will apply to the professional division during their second year. Admission to the professional division of the college (year 3) is competitive.

Beginning with fall 2000 the program of study leading to pharmacy licensure for entering freshman is the entry-level doctor of pharmacy (Pharm.D.). Students who have already completed a bachelor of science in pharmacy (B.S.P.) degree may enroll in the post-baccalaureate Pharm.D. degree program in order to gain additional skills and knowledge in various therapeutic areas.

Nationally, the last year for admission of freshmen who wish to pursue the five-year B.S.P. degree was fall semester 1999. All students enrolled in The University of Toledo College of Pharmacy B.S.P. program must complete their degree by June 2004. After that date, only the Pharm.D. degree will be accredited for pharmacy licensure by ACPE.

Contingent Admission Program

A small group of academically exceptional high school graduates may be offered contingent admission to the entry-level Pharm.D. program. Automatic admission to the third year of the curriculum will be contingent upon successful completion of the first and second preprofessional years, while maintaining specific scholastic standards.

Pharmaceutical Sciences (Non-Licensure Program)

The College of Pharmacy offers a four-year bachelor of science degree in pharmaceutical sciences (B.S.P.S.) to prepare students for a variety of careers in the pharmaceutical and biotechnological industries. Students seeking the B.S.P.S. degree will need to complete two years of course work in the lower division of the College of Pharmacy. Following the completion of a core set of required courses, students will apply to the

upper division during their second year. Admission to the upper division of the college is competitive. The B.S.P.S. will not prepare students for state board licensure nor will it prepare students to practice pharmacy.

Pharmacy Graduate Degree Programs

The College of Pharmacy offers several non-licensure graduate degrees: the master of science degree in pharmaceutical sciences with program options in pharmacology/toxicology, industrial pharmacy and administrative pharmacy; the master of science degree in medicinal chemistry degree; and the doctor of philosophy degree in medicinal chemistry. Students should contact the College of Pharmacy for admission and curricular requirements.

A graduate certificate program is available to any qualifying student holding a B.S. degree in natural science who wishes to take graduate level courses in pharmacology and toxicology. Students completing this 15 semester hour program will be awarded a certificate in pharmacology/toxicology.

In addition to the above graduate programs, the college offers 1) the post-baccalaureate doctor of pharmacy degree (students enrolled in this program are already licensed pharmacists who are continuing their education at the doctoral level), and 2) the entry-level doctor of pharmacy degree, which leads to licensure.

Admission to the College

New Students

All new students admitted to the College of Pharmacy will begin their studies in the preprofessional or lower division. All undergraduate students in the College of Pharmacy will be considered preprofessional or lower division students until admitted to the professional division of the B.S.P., professional division of the Pharm.D. program or the upper division of the B.S.P.S. program. For the entry-level Pharm.D. and four-year B.S.P.S. programs, the College of Pharmacy limits student enrollment into the professional division (third year) in accordance with its facilities.

Transfer Students

In order for a student to transfer from other Ohio universities into any of the baccalaureate programs of the College of Pharmacy or change from another college within The University of Toledo to the College of Pharmacy, the student must have a higher education cumulative grade point average (HEd GPA) of at least 2.5 (the HEd GPA is based on all letter grades attained at all institutions of higher learning and uses the point average scale of A = 4.0), be in good standing at the University, and be eligible to return. Evaluation of transcripts from other institutions is not done until a student is admitted into the College of Pharmacy. The student *may* be required to take placement tests in English, chemistry and/or algebra. A student who has attended another Ohio college of pharmacy must have a cumulative HEd GPA of 2.5, be in good standing at the university and be eligible to return to the college of pharmacy previously attended. Students who wish to transfer credit from another college or university must have been enrolled full time in The University of Toledo College of Pharmacy and registered for 16 semester hours (a letter grade must be received in each course) for the one semester prior to provisional acceptance to the professional/upper division.

Students with course work from non-Ohio institutions will be evaluated on an individual basis. After a student is admitted, the student may be asked to supply non-returnable college catalogs so that course equivalencies can be determined. The student also may be required to take placement tests in English, chemistry and/or algebra. All international transcripts submitted by transfer students must be evaluated by a College of Pharmacy designated independent agency, at the applicant's expense, for letter grade equivalency. Transfer students are only admitted to the lower division of the B.S. in pharmaceutical sciences or the preprofessional division of the B.S. in pharmacy or the entry-level Pharm. D. program. For a transfer student to be accepted into the second year of the program, all criteria and prerequisites for second-year class standing must be met. Second-year class standing begins only in the fall semester.

General Criteria for Admission to the Professional Division of the Entry-Level Doctor of Pharmacy and the Upper Division of the B.S. in Pharmaceutical Sciences

Admission to the professional/upper division normally is made only at the beginning of the fall semester. The number of students who receive final acceptance into either the upper division of the B.S. in pharmaceutical sciences program or the professional division of the B.S. in pharmacy or the entry-level doctor of pharmacy programs will be limited to the space available. Because the number of applicants usually exceeds the number of spaces, students are admitted on the basis of the following general criteria.

In order to be finally admitted into the professional/upper division, an applicant must have completed BIOL 2150 through 2180, CHEM 1230 through 1290, MATH 1750 and 1760, PHCL 2600 and 2620, CHEM 2410 through 2470, PHYS 1750 or its equivalent and ECON 1200; have completed a minimum of 63 earned semester hours prior to entrance into the professional/upper division; and have formally applied using the appropriate form (obtainable in the College of Pharmacy Office of Student Affairs — 1227 Wolfe Hall). If an applicant is accepted into the professional/upper division, the acceptance will be provisional pending the completion of the above courses. All course prerequisites for the professional/upper division must be completed two weeks before the first day of professional/upper division classes in the fall semester for which the application is made. If the applicant fails to meet the deadline for the completion of prerequisite courses, he/she will lose provisional admission status and must apply again for admission to the professional/upper division in the subsequent year.

Each applicant to the professional division of the licensure program will be asked to write an essay in response to a question provided by the admissions committee addressing a pharmacy-related issue.

Each applicant to the professional division will also provide the admissions committee (in care of the College of Pharmacy) with two letters of recommendation. The letters may be from professors, employers, clergy, close family friends and family health professionals (pharmacist, dentist, physician). Letters from relatives or College of Pharmacy faculty or staff are not acceptable.

All application materials must be received by the College of Pharmacy by a specified date of the same year the applicant anticipates entering the professional/upper division. There are no exceptions to the deadline.

A student who has applied for admission to the professional/upper division must maintain a 2.0 GPA (cumulative and semester) until all requirements for entrance into the professional/upper division are completed to be eligible for final admission.

In regard to admission into the professional/upper divisions, all applicants must have a cumulative GPA based upon a minimum of 16 semester hours at The University of Toledo (a letter grade must be received in each course). If a student has taken fewer than 30 semester hours at The University of Toledo, the higher educational grade point average (HEd GPA, which is based on all letter grades attained at all institutions of higher learning) will be used in the evaluation in place of The University of Toledo cumulative GPA if the HEd GPA value is less than The University of Toledo cumulative GPA. If the HEd GPA is greater than The University of Toledo cumulative GPA, the latter will be used.

Each application will be evaluated on the basis of the applicant's personal essay (licensure program only) as defined above; cumulative GPA; and science GPA in the following specified courses: CHEM 1230 and 1240; BIOL 2150 and 2170; MATH 1750; PHYS 1750 or 2070; CHEM 2410; and PHCL 2600. All transfer courses equivalent to these specified courses will be evaluated for their respective equivalent semester quality hours. A preprofessional division student will not be allowed to fulfill requirements for the professional division by enrollment in both organic chemistry and physics during the summer prior to the first professional division year.

For the licensure program, at least 80 percent of those students to be admitted provisionally will be selected by the admissions committee based on the above criteria. The remaining positions will be filled by the admissions committee using the above criteria and a personal interview.

For the B.S.P.S. program, a minimum of a 2.5 cumulative GPA and a 2.5 science GPA (as defined above) will be required for provisional admission to the upper division.

Specific criteria have been approved by the faculty of the College of Pharmacy for the admission of transfer students or of change-of-college students into the professional division. These are outlined as follows:

- Applicants who have fulfilled all admission criteria for the professional division by a specified date of the year of application can have their name added to the eligible applicant pool.
- It is the applicant's responsibility to insure that all University admission procedures or change-of-college procedures have been completed and that the necessary forms for the professional division application process have been received by the college by a specified date of the same year.
- The general criteria for admission to the professional division will be applied to the transfer student in the same manner as for the continuing College of Pharmacy student, i.e., cumulative GPA, science GPA, essential courses or their equivalents through the fall semester of the second year, personal essay and an accumulation of at least 44 semester hours. The applicant's cumulative GPA from The University of Toledo or HEd GPA (as defined above), science GPA based on all equivalent specified courses and personal essay will be used in determining admission.

214 College of Pharmacy

- The essential courses for final admission to the professional division consist of a three quarter or two semester sequence in general chemistry and its laboratories, a three quarter or two semester sequence in biology for majors and its laboratories, a three quarter or two semester sequence in mathematics (college algebra and courses equivalent to the Mathematics for Life Science sequence), a three quarter or two semester sequence in an equivalent functional anatomy and pathophysiology course, a three quarter or two semester sequence in organic chemistry and its laboratories, two quarters or one equivalent semester of intensive physics and the equivalent of a one semester microeconomics course. Sixty-three semester hours also are necessary for final admission.
- For the essential courses taken at other institutions, equivalency is almost automatic for courses in general chemistry, general biology for majors, organic chemistry and physics. Difficulty in determining equivalency has occurred with the mathematics sequence and the functional anatomy and pathophysiology sequence. In order to determine the equivalency of the mathematics courses and functional anatomy and pathophysiology courses, a) a complete syllabus or a complete set of course notes, b) examinations taken in the course, c) the name of the text and d) the name and telephone number of the course instructor or appropriate department chairperson should be provided.
- If a candidate is unable to meet the specified application deadline, the college has set up a second admission period after the initial admissions review if there are still spaces available for additional applicants.

College of Pharmacy Honors Program

The College of Pharmacy offers an Honors Program for eligible students in both B.S. in pharmaceutical sciences programs (licensure and nonlicensure tracks) as part of the University-wide Honors Program.

Highly qualified students entering the University in the College of Pharmacy will be considered for advanced placement and for entry into honors courses and honors sections of major courses offered in the first two years by the other colleges. Decisions regarding entry of students into the University Honors Program or into specific honors courses, will be made in consultation with the University Honors Program director and College of Pharmacy Honors advisers. Normally, entering students with an ACT composite score of 28 and above, coupled with a 3.75/4.00 high school GPA, will be considered for entry into honors courses. During the first two years of study, the College of Pharmacy offers courses that orient the student toward the profession of pharmacy and the pharmaceutical sciences and toward the moral and ethical responsibilities of pharmacists and pharmaceutical scientists. No honors sections of these orientation courses will be offered.

Two physiological chemistry courses and several electives are offered with honors sections. A specific honors seminar course and an honors thesis option are offered for some of the very best students in the program. These courses can fulfill requirements for electives. In addition to the overall college requirement, specific departmental requirements, on file in the respective department offices, also must be met for graduation from the College of Pharmacy with honors.

The B.S.P.S. with honors is attainable by all students who complete at least 33 semester hours of honors course work with a grade of B or better. In addition, at least 5 hours of the 33 noted above must be taken within the senior independent project and senior seminar. These courses are to be taken within the departments of medicinal and biological chemistry, pharmacology or pharmacy practice.

Academic Policies

The College of Pharmacy adheres to all of University of Toledo policies and procedures. Please refer to the *General Section* of this catalog for academic policies governing all students enrolled at the University. In any case where University, college and/or departmental policies conflict, the most stringent policy applies unless waived by the college. Students should consult with the college for a complete listing of all policies and procedures specifically related to the College of Pharmacy (e.g., the Student Council Professionalism Statement, Student Academic Code—Responsibilities and Rights, and Student Rights Code—Academic Review and Appeal Process.)

Attendance Requirements

Students in a professional school, as responsible individuals, are expected to attend all class meetings. The maximum number of permissible absences in a course is at the discretion of the individual faculty member. The penalty for excessive absences will be determined by the faculty member.

Withdrawal, Grade Deletion and Audit Policy

Refer to the General Information section of this catalog for Drop, Withdrawal, Grade Deletion and Audit policies that apply to all students.

Pass/No Credit (P/NC) Grade Option

Refer to the General Section of The University of Toledo General Catalog for General Academic Policies that apply to all students. P/NC grading is not available for courses taught in the College of Pharmacy. In addition to courses for which P/NC grading is used exclusively, a student may elect P/NC grading for an additional 7 credit hours excluding course work in the natural sciences (biology, chemistry, physics and mathematics with the exception of MATH 0980). These 7 P/NC hours are applicable only to courses in the humanities/fine arts and social sciences. Once the petition is filed, the request is irrevocable.

Good Standing for Undergraduate Students

The University of Toledo College of Pharmacy defines “Good Standing” as a cumulative GPA of 2.0. In addition, for the purpose of verifying State Board internship affidavits, the College of Pharmacy not only requires a cumulative GPA of 2.0, but also requires a GPA of 2.0 for the semester during which the internship credit is being requested. Students will not be granted internship credit for hours received during semesters they are on academic suspension.

Personal Fitness

The emotional and psychological stability of those practicing or preparing to practice pharmacy is considered to be very important for the proper performance of professional responsibility as a member of the health

team. The faculty of the College of Pharmacy recognizes that, if a student exhibits behavior suggesting an emotional or psychological abnormality bearing a reasonable relation to that student's ability to function competently in health care delivery systems, such behavior may present a hazard not only to the student, but to patients as well. If any behavior pattern provides reason to believe that a student's psychological or emotional state may have rendered that student incompetent or unsafe, the dean of the college shall meet with that student and attempt to resolve the situation by referral to the University Health Service, University Counseling Center and/or withdrawal from the pharmacy program.

Ethical Responsibility

The most serious offense with which pharmacy students may become involved is the misuse of and/or dependence upon dangerous drugs. The College of Pharmacy views the admitted or proven personal abuse of such drugs, their transmittal or sale to other individuals or the use of drug documents to illegally obtain controlled or legend drugs as unprofessional conduct, which may result in dismissal from the College of Pharmacy. In addition, Boards of Pharmacy may revoke the internship license and/or deny licensure for various drug offenses. Since a current internship license is necessary for entrance into the experiential rotations in the required component of the College of Pharmacy curriculum, students without an internship license will be denied admission into these classes. Drug abuse in any form and/or misuse of drug documents must be totally avoided by those desirous of becoming pharmacists.

Probation, Suspension, Dismissal and Academic Performance

For all undergraduate students (preprofessional and professional divisions) in the College of Pharmacy:

- A. Any student who fails to achieve a semester or cumulative GPA of 2.0 or greater at the end of any semester will automatically be placed on probation.
- B. Any student who fails to achieve a semester or cumulative GPA of 1.0 or greater at the end of any semester will automatically be placed on probation, will undergo a record review by the College of Pharmacy Academic Performance Committee (APC), and may be suspended from the University without a preliminary probationary semester.
- C. Any student who fails to achieve a semester or cumulative GPA of 2.0 or greater for any two of three consecutive semesters in attendance will undergo a record review by the College of Pharmacy APC and may be suspended from the University.

Suspension is made by the dean on advice from the College of Pharmacy APC, which reviews the performance of all students periodically. Suspension is from the University. The period of suspension is at least one semester exclusive of the summer terms. A student who is suspended must petition the dean for readmission, in writing (with a copy to the associate dean for student affairs), at least five weeks prior to the beginning of the semester to which the petition is directed. If the petition is accepted, the college will determine the conditions under which the student will be permitted to reenroll. If a student is readmitted and does not perform satisfactorily, permanent dismissal from the College of Pharmacy may result. A student who is on academic or disciplinary probation or suspension will be required to relinquish the duties of any office in the College of Pharmacy organizations until the student is in good standing, as defined above.

If a student is suspended, and therefore is ineligible to attend classes in a subsequent semester, that student must drop all of the courses for that semester.

Only those students who have attained a University GPA of 3.0 or greater will be permitted to register for more than 21 credit hours in any semester.

Preprofessional Division/Lower Division

Please refer to the General Section of The University of Toledo General Catalog for General Academic Policies governing all students enrolled at the University.

Student Academic Code — Responsibilities and Rights

Refer to the General Section of The University of Toledo General Catalog and The University of Toledo Student Handbook for general policies that apply to all students.

College Level Examination Program Credit (CLEP)

The College of Pharmacy grants up to a maximum of 30 semester CLEP credits. Credits earned in the natural sciences and mathematics section of the CLEP examination will count toward the degree as free electives but do not replace the requirement for any specific course in biology, chemistry, physics or mathematics. Credits earned in the humanities and social sciences examination will count only toward meeting the additional humanities and social science requirements.

Advanced Standing Credit

Refer to the General Section of The University of Toledo General Catalog for advanced standing credit (credit by exam) policies that apply to all students.

Degree Requirements

Bachelor of Science in Pharmacy Degree Requirements

Nationally, the last year for admission of freshmen who wish to pursue the 5-year B.S.P. degree was fall semester 1999. All currently enrolled students must complete their B.S.P. degree by June 2004. The B.S.P. degree is conferred upon candidates who have fulfilled the requirements described in this catalog. They are summarized as follows:

1. The completion of 169 semester hours of work.
2. The acquisition of 338 quality points or a GPA of at least 2.0 on the point average scale of A = 4 points.
3. The completion of all work required by the standard program for pharmacy students with such substitutions as may be approved by the dean of the college. The standard program may be revised at any time by faculty action. A student after five calendar years in the professional division may be required to retake courses and/or complete the course requirements consistent with the current College of Pharmacy bulletin.

4. Continuously enrolled students will be subject to the requirements for the degree of bachelor of science in pharmacy published in the Undergraduate Bulletin of the College of Pharmacy concurrent with their entry into the College of Pharmacy. Students without continuous enrollment, i.e., students who have been readmitted after an absence of an academic year (summers excluded), will be subject to the requirements concurrent with the semester during which they were readmitted to the college.
5. Student placement in college experiential rotations includes Cleveland and Toledo as well as other college-approved sites. In order to accommodate all students in the fifth year experiential rotations, it is necessary to assign students during the spring semester. (Summer and fall rotations are not available.) Each student is required to complete his or her experiential rotations at the assigned locations.

Curriculum

Preprofessional Division

First Year

First Semester

| | | | |
|------|------------------|------------------------------------|--------|
| PHPR | 1000 | Orientation | 1 |
| CHEM | 1090 or 1230* | Elementary/General Chem I | 3 or 4 |
| CHEM | 1280* | General Chemistry Lab I | 1 |
| BIOL | 2150 | Fund. of Life Sciences I | 4 |
| BIOL | 2160 | Fund. of Life Sciences Lab I | 1 |
| MATH | 1750 | Math. for Life Sciences I | 4 |
| | | Core Elective(s)** | 4 or 3 |

Second Semester

| | | | |
|------|------|-------------------------------------|---|
| CHEM | 1240 | General Chemistry II | 4 |
| CHEM | 1290 | General Chemistry Lab II | 1 |
| BIOL | 2170 | Fund. of Life Sciences II | 4 |
| BIOL | 2180 | Fund. of Life Sciences Lab II | 1 |
| MATH | 1760 | Math. for Life Sciences II | 3 |
| | | Core Elective** | 3 |

*Depending on results of chemistry and mathematics placement examinations. If CHEM 1090 is required, it must be completed successfully before CHEM 1230 and 1280 may be taken, followed by CHEM 1240 and 1290.

Second Year

First Semester

| | | | |
|------|------|--|---|
| PHPR | 2010 | Introduction to Patient Care | 2 |
| CHEM | 2410 | Organic Chemistry I | 3 |
| CHEM | 2460 | Organic Chemistry Lab I | 1 |
| PHCL | 2600 | Funct. Anat. & Pathophysiology I | 4 |
| PHYS | 1750 | Selected Topics in Physics | 4 |
| | | Core Elective** | 3 |

Second Semester

| | | | |
|------|------|---|---|
| CHEM | 2420 | Organic Chemistry II | 3 |
| CHEM | 2470 | Organic Chemistry Lab II | 1 |
| PHCL | 2620 | Funct. Anat. & Pathophysiology II | 4 |
| | | Core Elective(s)** | 9 |

Professional Division

Third Year

First Semester

| | | | |
|------|------|-----------------------------------|---|
| MBC | 3310 | Medicinal Chemistry I | 3 |
| MBC | 3550 | Physiological Chemistry I | 3 |
| PHCL | 3700 | Pharmacology I | 3 |
| PHPR | 3010 | Pharmaceutical Calculations | 2 |
| PHPR | 3070 | Pharmaceutics I | 4 |
| PHPR | 3510 | Pharm. Dimension of Health | 3 |

Second Semester

| | | | |
|------|------|-------------------------------------|---|
| MBC | 3320 | Medicinal Chemistry II | 3 |
| MBC | 3560 | Physiological Chemistry II | 3 |
| MBC | 3800 | Microbiology & Immunology | 3 |
| MBC | 3850 | Microbiology & Immunology Lab | 1 |
| PHCL | 3720 | Pharmacology II | 3 |
| PHPR | 3080 | Pharmaceutics II | 4 |

Fourth Year

First Semester

| | | | |
|------|------|-------------------------------------|---|
| MBC | 4300 | Chemotherapy & Immunotherapy | 3 |
| PHCL | 4700 | Pharmacology III | 3 |
| PHCL | 4150 | Biopharm & Pharmacokinetics | 4 |
| PHPR | 4400 | Human Interact. in Healthcare | 2 |
| PHPR | 4410 | Profess. Pract. Develop I | 3 |
| PHPR | 4820 | Drug Therapy I | 3 |

Second Semester

| | | | |
|------|------|----------------------------------|---|
| PHCL | 4720 | Pharmacology IV | 3 |
| PHPR | 4420 | Profess. Pract. Develop II | 3 |
| PHPR | 4520 | Healthcare Administration | 3 |
| PHPR | 4830 | Drug Therapy II | 3 |
| | | Core Elective ** | 3 |

Fifth Year

First Semester

| | |
|--|----|
| Professional Electives | 13 |
| Professional Electives are taught in the College of Pharmacy | |

Second Semester

| | | | |
|------|------|----------------------------------|---|
| PHPR | 4940 | Experiential Rotation I | 4 |
| PHPR | 4940 | Experiential Rotation II | 4 |
| PHPR | 4940 | Experiential Rotation III | 4 |
| PHPR | 4940 | Experiential Rotation IV | 4 |
| PHPR | 4870 | Adv. Prin. of Patient Care | 1 |

Core/Humanities and Social Sciences

Requirements:

| | | |
|------------------------------------|--|---|
| ENGL | 1110 | 3 |
| ENGL | 1130, 1140, 1170, 1180, 1190, 1210, 1220 or 1230 | 3 |
| ECON | 1200 | 3 |
| Select one (1) from the following: | | |
| PSY | 1010 | 3 |
| SOC | 1010 | 3 |

**Core Electives refer to both University and college core elective requirements

To complete the total number of hours required for the bachelor of science in pharmacy degree, a student may choose freely with the following exceptions. Remedial courses may not be used. Furthermore, students may not apply more than a total of two credit hours from the following

areas: studio art courses (ART), music courses with performing groups (MUS), activities courses (RCA/RCRT) and recreation and leisure studies (RLS).

Entry-Level Doctor of Pharmacy Degree Requirements

Following admission to the professional division, the entry-level Pharm.D. program students will complete a B.S.P.S. prior to admission to the graduate portion of the program. Students in the entry-level Pharm.D. track who have completed the B.S.P.S. at The University of Toledo with a 3.0 GPA are eligible for admission to the graduate portion of the Pharm.D. program provided that professional pharmacy standards and regulations are met.

A formal preadmission decision to the graduate portion of the Pharm.D. program will be made at the end of the fourth year while in the professional division. The final decision is contingent upon completion of the B.S.P.S. degree with a minimum GPA of 3.0. In order to graduate with the doctor of pharmacy degree, students must maintain a minimum of a 3.0 GPA with no grade lower than a C (2.0) in graduate courses as required for all graduate students.

Only students in the Pharm.D. track of the B.S.P.S. degree program will eventually qualify for state board licensure in the practice of pharmacy. To qualify, the student also must complete the graduate portion of the Pharm.D. curriculum. According to the American Council on Pharmaceutical Education, the national accrediting board for pharmacy in the United States (U.S.), all students graduating from any U.S. college of pharmacy after June 2004, and who are seeking licensure, will be required to hold the Pharm.D. degree.

A total of 137 semester hours is required for graduation with the B.S.P.S. - Pharm.D. track degree. Eligible students then may matriculate into the graduate portion of the Pharm.D. degree (see above statement). The curriculum is outlined below.

First Year

First Semester

| | | | |
|------|------|------------------------------------|---|
| PHPR | 1000 | Orientation | 1 |
| CHEM | 1230 | General Chemistry I | 4 |
| CHEM | 1280 | General Chemistry Lab I | 1 |
| BIOL | 2150 | Fund. of Life Sciences I | 4 |
| BIOL | 2160 | Fund. of Life Sciences Lab I | 1 |
| MATH | 1750 | Math. for Life Sciences I | 4 |
| | | UT Core requirement | 3 |

Second Semester

| | | | |
|------|------|-------------------------------------|---|
| CHEM | 1240 | General Chemistry II | 4 |
| CHEM | 1290 | General Chemistry Lab II | 1 |
| BIOL | 2170 | Fund. of Life Sciences II | 4 |
| BIOL | 2180 | Fund. of Life Sciences Lab II | 1 |
| MATH | 1760 | Math. for Life Sciences II | 3 |
| | | UT Core requirement | 3 |

Second Year

First Semester

| | | | |
|------|------|------------------------------------|---|
| PHPR | 2010 | Introduction to Patient Care | 2 |
| CHEM | 2410 | Organic Chemistry I | 3 |
| CHEM | 2460 | Organic Chemistry Lab I | 1 |

| | | | |
|------|------|--|---|
| PHCL | 2600 | Funct. Anat. & Pathophysiology I | 4 |
| PHYS | 1750 | Selected Topics in Physics | 4 |
| | | UT Core requirement | 3 |

Second Semester

| | | | |
|------|------|---|---|
| CHEM | 2420 | Organic Chemistry II | 3 |
| CHEM | 2470 | Organic Chemistry Lab II | 1 |
| PHCL | 2620 | Funct. Anat. & Pathophysiology II | 4 |
| | | UT Core requirements | 9 |

Third Year

First Semester

| | | | |
|------|------|---|---|
| MBC | 3310 | Medicinal Chemistry I | 3 |
| PHCL | 3700 | Pharmacology I | 3 |
| MBC | 3550 | Physiological Chemistry I | 3 |
| PHPR | 3070 | Pharmaceutics I | 4 |
| PHPR | 3010 | Calculations | 2 |
| PHPR | 3510 | Pharmaceutic Dimensions of Hlth Care Sys .. | 3 |

Second Semester

| | | | |
|------|------|-------------------------------------|---|
| MBC | 3320 | Medicinal Chemistry II | 3 |
| PHCL | 3720 | Pharmacology II | 3 |
| MBC | 3560 | Physiological Chemistry II | 3 |
| PHPR | 3080 | Pharmaceutics II | 4 |
| MBC | 3800 | Microbiology & Immunology | 3 |
| MBC | 3850 | Microbiology & Immunology Lab | 1 |
| PHPR | 3940 | Early Practice Development* | 1 |

Fourth Year

First Semester

| | | | |
|------|------|--|---|
| PHPR | 3940 | Early Practice Development* | 1 |
| PHPR | 4400 | Human Interactions in Healthcare | 2 |
| PHPR | 4410 | Professional Development I | 3 |
| PHPR | 4430 | Pathophysiology and Pharmacotherapy: Introduction | 1 |
| PHCL | 4700 | Pharmacology III | 3 |
| PHCL | 4150 | Biopharmaceutics & Pharmacokinetics | 4 |
| MBC | 4300 | Chemotherapy & Immunotherapy | 3 |

* Some students will take PHPR 3940 in the fall; others will take it in the spring.

Second Semester

| | | | |
|------|------|-----------------------------------|---|
| PHPR | 4520 | Management and Marketing | 3 |
| PHPR | 4420 | Professional Development II | 3 |
| PHPR | 4440 | PPT: Immunology | 2 |
| PHPR | 4450 | PPT: Renal | 3 |
| PHCL | 4720 | Pharmacology IV | 3 |
| | | UT Core requirement | 3 |

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

Subsequent Graduate Courses in the Pharm.D. Program

First Semester: Summer between Fourth and Fifth Year

| | | | |
|------|------|--------------------------------------|---|
| PHCL | 5140 | Statistics | 2 |
| PHPR | 6210 | Research Methods | 2 |
| PHPR | 6940 | Professional Practice Exposure | 2 |

(PHPR 6940 will consist of 80 hours of pharmacy practice)

Second Semester: Fall Semester-Fifth Year

| | | | |
|------|------|---------------------------------|---|
| PHPR | 6420 | PPT: Cardiology | 4 |
| PHPR | 6430 | PPT: Pulmonary | 3 |
| PHPR | 6440 | PPT: Infectious Disease | 4 |
| PHPR | 6230 | Patient Care Rounds I | 3 |
| PHPR | 6160 | Advanced Pharmacokinetics | 3 |

Third Semester: Spring Semester-Fifth Year

| | | | |
|------|------|---------------------------------------|---|
| PHPR | 6370 | PPT: Nutrition | 1 |
| PHPR | 6490 | PPT: Hematology/Oncology | 3 |
| PHPR | 6510 | PPT: Toxicology | 1 |
| PHPR | 6250 | Self Care | 3 |
| PHPR | 6240 | Patient Care Rounds II | 3 |
| PHPR | 6550 | Management Topics | 2 |
| PHPR | 6610 | Seminar I | 1 |
| PHPR | 8390 | PPT: Gastro-Intestinal | 2 |
| | | Graduate Professional Electives | 2 |

Fourth Semester: Summer between Fifth and Sixth Year

| | | | |
|------|------|---------------------------------------|---|
| PHPR | 6380 | PPT: Endocrine | 2 |
| PHPR | 8470 | PPT: Rheumatology | 1 |
| PHPR | 8480 | PPT: Psychiatric/Neurological | 3 |
| PHPR | 8500 | PPT: Pediatrics/Geriatrics | 2 |
| PHPR | 8640 | PPT: Capstone | 2 |
| PHPR | 8620 | Seminar II | 1 |
| PHPR | 8260 | Pharmacy Jurisprudence & Ethics | 1 |
| | | Graduate Professional Electives | 3 |

Fifth Semester: Fall Semester-Sixth Year

| | | | |
|------|----------|---------------------|---|
| PHPR | 8940:001 | Clerkship I | 4 |
| PHPR | 8940:002 | Clerkship II | 4 |
| PHPR | 8940:003 | Clerkship III | 4 |
| PHPR | 8940:004 | Clerkship IV | 4 |
| PHPR | 8630 | Seminar III | 2 |

Sixth Semester: Spring Semester-Sixth Year

| | | | |
|------|----------|----------------------|---|
| PHPR | 8940:005 | Clerkship V | 4 |
| PHPR | 8940:006 | Clerkship VI | 4 |
| PHPR | 8940:007 | Clerkship VII | 4 |
| PHPR | 8940:008 | Clerkship VIII | 4 |

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

Bachelor of Science in Pharmaceutical Sciences Non-Pharm.D. Track Degree Requirements

The bachelor of science degree program in pharmaceutical sciences (B.S.P.S.) for non-Pharm.D. or non-licensure majors is a four-year baccalaureate program at The University of Toledo College of Pharmacy. This curriculum takes advantage of the educational base of the college in the health-related sciences. Graduates with the four-year degree in pharmaceutical sciences who are not seeking the Pharm.D. major will not be prepared or qualified for the state board licensure in the practice of pharmacy. The curriculum for these programs is divided into course work that assures a broad liberal education in the arts and sciences followed by an advanced course of study that leads to a concentration in the pharmaceutical sciences. The structure, diversity and functional characterization of living systems will be studied, examined and

understood with emphasis on the nature of disease and the design and development of therapeutic entities.

While students who major in these more basic disciplines move on to increasingly specialized courses within those separate sciences, students of the pharmaceutical sciences, biomedical sciences or related life sciences matriculate in courses of study that continue to stress a cross fertilization of the ideas of fundamental biology and chemistry while focusing on the complexity and balance of living systems.

General Program Requirements

A total of 132 semester hours are required for graduation with the B.S.P.S. - non-Pharm.D. options.

Lower Division Requirements

In years 1 and 2, students in the B.S.P.S. program are required to meet the same requirements as are met by students in the Pharm.D. program. These are noted below:

First Year

First Semester

| | | | |
|------|-------|------------------------------------|--------|
| PHPR | 1000 | Orientation | 1 |
| CHEM | 1230* | Elementary/General Chem I | 3 or 4 |
| CHEM | 1280* | General Chemistry Lab I | 1 |
| BIOL | 2150 | Fund. of Life Sciences I | 4 |
| BIOL | 2160 | Fund. of Life Sciences Lab I | 1 |
| MATH | 1750 | Math. for Life Sciences I | 4 |
| | | Core Elective(s) ** | 4 or 3 |

Second Semester

| | | | |
|------|------|-------------------------------------|---|
| CHEM | 1240 | General Chemistry II | 4 |
| CHEM | 1290 | General Chemistry Lab II | 1 |
| BIOL | 2170 | Fund. of Life Sciences II | 4 |
| BIOL | 2180 | Fund. of Life Sciences Lab II | 1 |
| MATH | 1760 | Math. for Life Sciences II | 3 |
| | | Core Elective(s) ** | 3 |

*Depending on results of chemistry and mathematics placement examinations.

If CHEM 1090 is required, it must be completed successfully before CHEM 1230 and 1280 may be taken, followed by CHEM 1240 and 1290.

Second Year

First Semester

| | | | |
|------|------|--|---|
| PHPR | 2010 | Introduction to Patient Care | 2 |
| CHEM | 2410 | Organic Chemistry I | 3 |
| CHEM | 2460 | Organic Chemistry Lab I | 1 |
| PHCL | 2600 | Funct. Anat. & Pathophysiology I | 4 |
| PHYS | 1750 | Selected Topics in Physics | 4 |
| | | Core Elective(s)** | 3 |

Second Semester

| | | | |
|------|------|---|---|
| CHEM | 2420 | Organic Chemistry II | 3 |
| CHEM | 2470 | Organic Chemistry Lab II | 1 |
| PHCL | 2620 | Funct. Anat. & Pathophysiology II | 4 |
| | | Core Elective(s)** | 9 |

Required Core of Upper Division Program for Pharmacology/ Toxicology or Medicinal Chemistry Options*

* Admission to the upper division requires a 2.5 cumulative and science GPA

Third Year

| | | | |
|------|------|----------------------------------|---|
| MBC | 3310 | Medicinal Chemistry I | 3 |
| MBC | 3320 | Medicinal Chemistry II | 3 |
| PHCL | 3700 | Pharmacology I | 3 |
| PHCL | 3720 | Pharmacology II | 3 |
| MBC | 3550 | Physiological Chemistry I | 3 |
| MBC | 3560 | Physiological Chemistry II | 3 |

Fourth Year

| | | | |
|------|------|-------------------------------------|---|
| PHCL | 4700 | Pharmacology III | 3 |
| MBC | 4710 | Targeted Drug Design or | |
| MBC | 4720 | Advances in Drug Design or | |
| PHCL | 4800 | Human-Xenobiotic Interactions | 3 |

**Core Electives refer to both University and college core elective requirements

This general plan requires that about one-half of the 64 semester hours of coursework (an average of 16 hours/semester) taken in the upper division will be in the required core. The remaining courses would allow for a substantially variable elective program tailored to the interests of individual students.

Pharmacology/Toxicology (PTOX) Majors

In addition to the required core of courses for the upper division of the B.S.P.S. program, PHCL 4730, PHCL 4750 and PHCL 4760 are strongly recommended for all PTOX majors. For PTOX majors, a total of 24 semester hours in the upper division must be taken from the list of elective courses noted below.

Medicinal Chemistry (MBC) Majors

In addition to the required core of courses for the upper division of the B.S.P.S. program, an additional 25 hours of course work must be selected from the list of elective courses below. Further, the final 15 hours of course work necessary for the degree fulfillment may be selected, with the permission of the major adviser, from other undergraduate offerings at the 3000 or 4000 level.

PTOX and MBC Elective Courses

| | | | |
|------|------|---|---|
| BIOL | 3010 | Molecular Genetics | 3 |
| BIOL | 3020 | Molecular Genetics Lab | 2 |
| BIOL | 3030 | Cell Biology | 3 |
| BIOL | 3040 | Cell Biology Lab | 2 |
| BIOL | 4010 | Molecular Biology | 3 |
| BIOL | 4030 | Microbiology | 3 |
| BIOL | 4050 | Immunology | 3 |
| BIOL | 4110 | Human Genetics | 3 |
| BIOL | 4330 | Parasitology | 3 |
| CHEM | 3310 | Analytical Chemistry | 2 |
| CHEM | 3320 | Analytical Chemistry Lab | 2 |
| CHEM | 4300 | Instrumental Analysis | 2 |
| CHEM | 3710 | Physical Chemistry for the Biosciences I | 3 |
| CHEM | 3720 | Physical Chemistry for the Biosciences II or alternative to CHEM 3710/3720 | 3 |
| CHEM | 3730 | Physical Chemistry I | 3 |
| CHEM | 3740 | Physical Chemistry II | 3 |
| MBC | 3800 | Immunology & Microbiology | 3 |
| MBC | 4300 | Chemotherapy and Immunotherapy | 3 |

| | | | |
|------|---------|---|-----|
| MBC | 4340 | Contemporary Natural Remedies | 2 |
| MBC | 4380 | Medicinal Plants | 2 |
| MBC | 4410 | Nutrition in Health and Disease | 2 |
| MBC | 4420 | Neuroscience | 2 |
| MBC | 4430 | Biochemistry of Disease | 2 |
| MBC | 4450 | New Drug Development | 2 |
| MBC | 4470 | Advanced Immunotherapeutics | 2 |
| MBC | 4480 | Chemical Defense Mechanisms in Plants | 2 |
| MBC | 4710** | Targeted Drug Design | 3 |
| MBC | 4720** | Advances in Drug Design | 3 |
| MBC | 4760 | Biochemical Toxicology | 2 |
| MBC | 4770 | Molecular Modeling in Drug Design | 3 |
| MBC | 4800 | Quantitative Structure Activity Relationships | 2 |
| MBC | 4950:01 | Research in Medicinal Chemistry | 6-8 |
| MBC | 4950:91 | Research in Medicinal Chemistry - Honors | 6-8 |
| MBC | 4980 | Special Topics in Drug Design | 1-4 |
| PHCL | 4140 | Biostatistics | 3 |
| PHCL | 4150 | Biopharmaceutics/Pharmacokinetics | 4 |
| PHCL | 4300 | Selected Topics in Pharmacology | 2 |
| PHCL | 4600 | Epidemiology | 4 |
| PHCL | 4620 | Pharmacoepidemiology | 4 |
| PHCL | 4710 | Pharmacology/Toxicology Seminar | 3 |
| PHCL | 4720 | Pharmacology IV: Chemotherapeutics | 3 |
| PHCL | 4730 | Toxicology I | 3 |
| PHCL | 4740 | Introduction to Clinical Toxicology | 2 |
| PHCL | 4750 | Toxicology II | 3 |
| PHCL | 4760 | Toxicokinetics | 3 |
| PHCL | 4770 | Toxicological Risk Assessment | 3 |
| PHCL | 4780 | Practicum in Toxicology | 12 |
| PHCL | 4800** | Human-Xenobiotic Interactions | 3 |
| PHCL | 4850 | Drug Disposition | 2 |
| PHPR | 4010 | Modern Drug Delivery | 2 |

**Students may take as elective if not chosen as part of required core.

Senior Independent Project

Students in the B.S.P.S. program may develop, in collaboration with a specific faculty adviser, a short-term experimental problem designed to introduce them to research in the pharmaceutical sciences. This activity is expected to develop intensively over one or more semesters during the senior year and will be coordinated with a senior seminar or capstone course, which will focus more broadly on research ideas and their resolution (e.g., MBC 4710 or MBC 4720). Submission and acceptance by the faculty of a formal paper based on the experimental work will be a requirement.

Career Service Options

Often students will begin to develop specific career interests relatively early. Students may be placed during a summer session or on occasion during an academic semester in a practicum site. For example, students interested in toxicology as a longer-term career option may be provided with the opportunity to work in an industrial or government toxicology laboratory or regulatory agency.

Such "real life" experiences are valuable to students and will invariably help them select their career choices. Initially, this program will be voluntary; that is, it will not be required for graduation. The off campus experience will be available to as many students in the program for whom it can be arranged. Those wishing a career in industry immediately after graduation will be encouraged to take this option when it becomes available. In certain well-defined cases these experiences may be used as the basis for the senior independent project.

Required Core of Upper Division Program for Pharmaceutics (PHAR) Option*

* Admission to the upper division requires a 2.5 cumulative and science GPA

Third Year

| | | | |
|------|------|------------------------|---|
| PHPR | 3010 | Calculations | 2 |
| PHPR | 3070 | Pharmaceutics | 4 |
| PHPR | 3080 | Pharmaceutics II | 4 |
| MBC | 3310 | Med Chem I | 3 |
| MBC | 3320 | Med Chem II | 3 |
| MBC | 3550 | Physiol Chem I | 3 |
| MBC | 3560 | Physiol Chem II | 3 |
| PHCL | 3700 | Pharmacology I | 3 |
| BIOE | 2200 | Biomaterials | 3 |
| ECON | 4750 | Health Economics | 3 |
| PHCL | 3720 | Pharmacology II | 3 |

Fourth Year

| | | | |
|------|------|---|--------|
| CHEM | 3310 | Analytical Chem | 2 |
| CHEM | 3360 | Analytical Chem Lab | 2 |
| PHCL | 4150 | Biopharmaceutics/Kinetics | 4 |
| PHCL | 4700 | Pharmacology III | 3 |
| PHCL | 4720 | Pharmacology IV | 3 |
| PHPR | 4550 | Analysis of Pharm. Environment | 3 |
| | | Biology Elective | 3 or 4 |
| | | UT Core Requirement | 3 |
| | | Pharmaceutics & General Electives | 9 |

Required Core of Upper Division Program for Pharmacy Administration (PHAM) Option*

* Admission to the upper division requires a 2.5 cumulative and science GPA

Third Year

| | | | |
|------|------|------------------------------------|---|
| MBC | 3310 | Med Chem I | 3 |
| MBC | 3320 | Med Chem II | 3 |
| MBC | 3550 | Physio Chem I | 3 |
| MBC | 3560 | Physiol Chem II | 3 |
| MBC | 3800 | Microbiology/Immunology | 3 |
| PHCL | 3700 | Pharmacology I | 3 |
| PHCL | 3720 | Pharmacology II | 3 |
| BUAD | 2040 | Financial Acct Info | 3 |
| BUAD | 1020 | Micro-Computer Appl Business | 3 |
| | | Multicultural Electives | 6 |

Fourth Year

| | | | |
|------|------|--|---|
| PHCL | 4700 | Pharmacology III | 3 |
| PHCL | 4720 | Pharmacology IV | 3 |
| PHPR | 4550 | Analysis of Pharm Environment | 3 |
| BUAD | 3010 | Principles of Marketing | 3 |
| BUAD | 2060 | Data Analysis for Business | 3 |
| BUAD | 3030 | Management & Behav Proc Orgs | 3 |
| BUAD | 3040 | Principles of Financial Management | 3 |
| | | Specialty Business Core requirements** | 6 |
| | | Adviser-approved Electives | 3 |

**Specialty Business Core credits may be taken from the following list:

| | | | |
|------|------|--------------------------------------|---|
| HURM | 3220 | Human Resource Management | 3 |
| ORGD | 4780 | Leadership Skills | 3 |
| PSLS | 3440 | Sales | 3 |
| PSLS | 4740 | Advanced Sales | 3 |
| MKTG | 4540 | Business Marketing | 3 |
| MKTG | 4570 | Product and Pricing Management | 3 |

| | | | |
|------|------|--|---|
| BUAD | 2070 | Appl of Stat in Business Decisions | 3 |
| BUAD | 3020 | Prin Manufacturing & Service Systems | 3 |
| OPMT | 3340 | Quality Management | 3 |

Criteria for B.S.P.S. Class Standing

| Year | Criteria |
|---------|---|
| First | Earned less than 30 semester hours. |
| Second | Earned at least 30 semester hours, have a HED GPA (as previously defined) of 2.5 or greater (based on the point average scale of A = 4.0) and enrolled for organic chemistry, physics and functional anatomy and pathophysiology. |
| Third | Earned at least 63 semester hours and officially accepted into the professional or the upper division. |
| Fourth* | Earned at least 101 semester hours and enrolled for PHCL 4150 and PHCL 4700. |

* Pharm.D. Track

Note: The student is responsible for the correct selection of the program of study each semester and for the fulfillment of the requirements given here. Although advisers will assist wherever possible, the final responsibility rests with the student.

The College of Pharmacy reserves the right to change its policies and procedures at any time. These changes will be binding on the date they are approved by faculty action. Courses taken at other colleges of pharmacy will not substitute for professional division courses.

A student will only be permitted to take PHPR 1000 and 2010, and PHCL 2600 and 2620 in the College of Pharmacy until admitted to the professional or upper division. Only students admitted to the professional or upper division will be allowed to take 3000 or 4000 level courses in the college.

College of Pharmacy Faculty

Department of Medicinal & Biological Chemistry

Julian A. Davies, 1987*, distinguished university professor
B.Sc., Imperial College of Sci. & Tech.; Ph.D., University of London

Paul W. Erhardt, 1994, professor
B.A., Ph.D., University of Minnesota

Max O. Funk, 1987*, professor
B.S., Pennsylvania State University; Ph.D., Duke University

Stephen L. Goldman, 1987*, professor
A.B., Brooklyn College; M.S., Ph.D., University of Missouri

Channing L. Hinman, 1985, associate professor
B.S., Brigham Young University; Ph.D., University of California-Los Angeles

Wayne P. Hoss, 1985, professor and associate dean for research and graduate education
B.S., University of Idaho; Ph.D., University of Nebraska

Richard A. Hudson, 1985, professor, interim vice provost for graduate education and dean of the graduate school
B.A., Kalamazoo College; Ph.D., University of Chicago

Jon R. Kirchhoff, 1997*, associate professor
B.A., State University of New York - Cortland; Ph.D., Purdue University

Richard W. Komuniecki, 1997*, professor
A.B., Holy Cross College; M.S., Ph.D., University of Massachusetts

Marcia F. McInerney, 1991, associate professor and interim chair
B.A., University of Connecticut; M.S., Case Western University; Ph.D., University of Michigan

William S. Messer Jr., 1985, professor
B.S., Springfield College; M.S., Ph.D., University of Rochester

Steven M. Peseckis, 1994, associate professor
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A. Alan Pinkerton, 1987*, professor
R.I.C., Brighton College of Technology; Ph.D., University of Alberta

Joseph Schradie 1965, professor emeritus
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James T. Slama, 1991, associate professor
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ASSOCIATED FACULTY

Graham J. Durant, 1987, adjunct professor
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Wieslaw Klis, 2001, research assistant professor
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Jeffrey Sarver, 2001, research assistant professor
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Department of Pharmacology

Kenneth A. Bachmann, 1973, professor
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James Byers, 1998, assistant professor
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Johnnie L. Early II, 2000, professor and dean
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Robert B. Forney, 1981*, associate professor (Medical College of Ohio and The University of Toledo)
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Ezdihar A.M. Hassoun, 1995, associate professor
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Christine N. Hinko, 1979, professor and associate dean of student affairs
B.A., Clarion State College; Ph.D., The Ohio State University

Boji Huang, 1997, assistant professor
M.D., First Medical School; M.S., University of Illinois - Champaign/ Urbana; Ph.D., University of Texas

William S. Messer Jr., 1985, professor and chair
B.S., Springfield College; M.S., Ph.D., University of Rochester

Robert J. Schlembach, 1954, professor emeritus
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Donald B. White, 1995*, associate professor
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Department of Pharmacy Practice

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224 College of Pharmacy

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| Rich Abel, R.Ph. | Larry Clark, R.Ph. | Craig Gilt, R.Ph. | Alison Kollias, R.Ph. |
| Mary Abraham, R.Ph. | Pam Clegg, R.Ph. | Michael Gladieux, R.Ph. | Beverly Kolva, R.Ph. |
| Joe Adams, R.Ph. | Jim Cole, R.Ph. | Connie Glowacki, R.Ph. | Phillip Korczynski, R.Ph. |
| Jeannie Alexander, R.Ph. | Barb Connolly, R.Ph. | John Gnatowski, R.Ph. | Linda Kosakowski, R.Ph. |
| Marshall Allan, R.Ph. | Sabina Conroy, R.Ph. | Kimberly Goetz, R.Ph. | Maija Kraemer, R.Ph. |
| Thomas Altenberger, R.Ph. | Harold Cooper, R.Ph. | Gerry Goodfriend, R.Ph. | Lisa Kreibel, R.Ph. |
| Kamal Amin, R.Ph. | Anne Copeland, R.Ph. | Mary Beth Gora-Byrd, Pharm.D. | Floyd Krieghoff, R.Ph. |
| Charles Anderson, R.Ph. | Violet Costoff, R.Ph. | Jim Granecki, R.Ph. | Mike Krugh, R.Ph. |
| Thomas Arkwright, R.Ph. | Larry Cowgill, R.Ph. | Scott Grant, R.Ph. | Carol Krzyston, R.Ph. |
| Steve Armatas, R.Ph. | Randy Crawford, R.Ph. | Sue Gratz, R.Ph. | Rob Kubasak, R.Ph. |
| William Armbrecht, R.Ph. | Eric Cropp, R.Ph. | Daniel Green, R.Ph. | Jay Kuhn, R.Ph. |
| Dave Augustine, R.Ph. | Leslie Csernyik, R.Ph. | Mike Grieselding, R.Ph. | Kevin Kulczak, R.Ph. |
| Susan Ayers, R.Ph. | Dennis Czesak, R.Ph. | Janet Griffin, R.Ph. | Todd Kurek, R.Ph. |
| Norman Baciak, R.Ph. | Rich D'Ati, R.Ph. | Helen Gutierrez, R.Ph. | Leon Kwait, R.Ph. |
| Misty Baehr, R.Ph. | Richard Dawson, R.Ph. | Helene Hall, R.Ph. | Stephanie Kyle, R.Ph. |
| James Baker, R.Ph. | Andrea Decker, R.Ph. | Don Halliday, R.Ph. | Lous C. Kynard, R.Ph. |
| Elizabeth Baishnab, R.Ph. | David Decker, R.Ph. | Rochelle Hall-Rollins, R.Ph. | Brad Laboe, R.Ph. |
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| Kara Balash, R.Ph. | Amy Jo DeMarsh, R.Ph. | Jack Hansen, R.Ph. | Carla Lamson, R.Ph. |
| Kathleen Ballard, R.Ph. | Kristen DeSantis, R.Ph. | Jackie Hansford, R.Ph. | Melissa LaMunyon, R.Ph. |
| Kenneth Barker, R.Ph. | Art DiGregorio, R.Ph. | Katherine Harder, R.Ph. | Tim Lanese, R.Ph. |
| Thomas Baron, R.Ph. | Tony Ditommaso, R.Ph. | Randy Harris, R.Ph. | Carol Langenderfer, R.Ph. |
| Karen Beard, R.Ph. | Cindy Dorety, R.Ph. | Dave Hegemier, R.Ph. | Laura Lautenschleger, R.Ph. |
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