



PharmD/PhD Dual Degree PROGRAM **HANDBOOK**



THE UNIVERSITY OF
TENNESSEE
HEALTH SCIENCE CENTER™

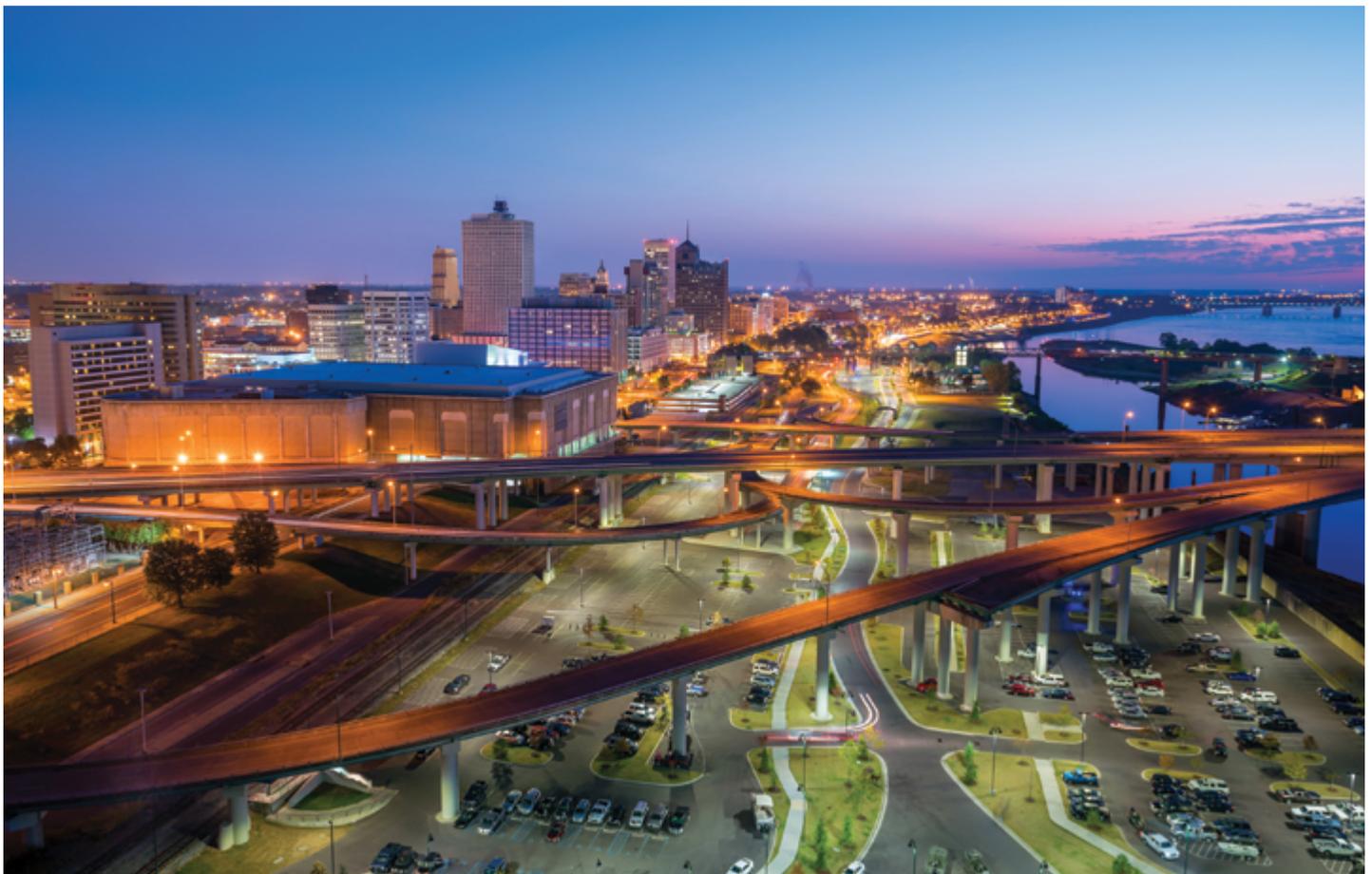
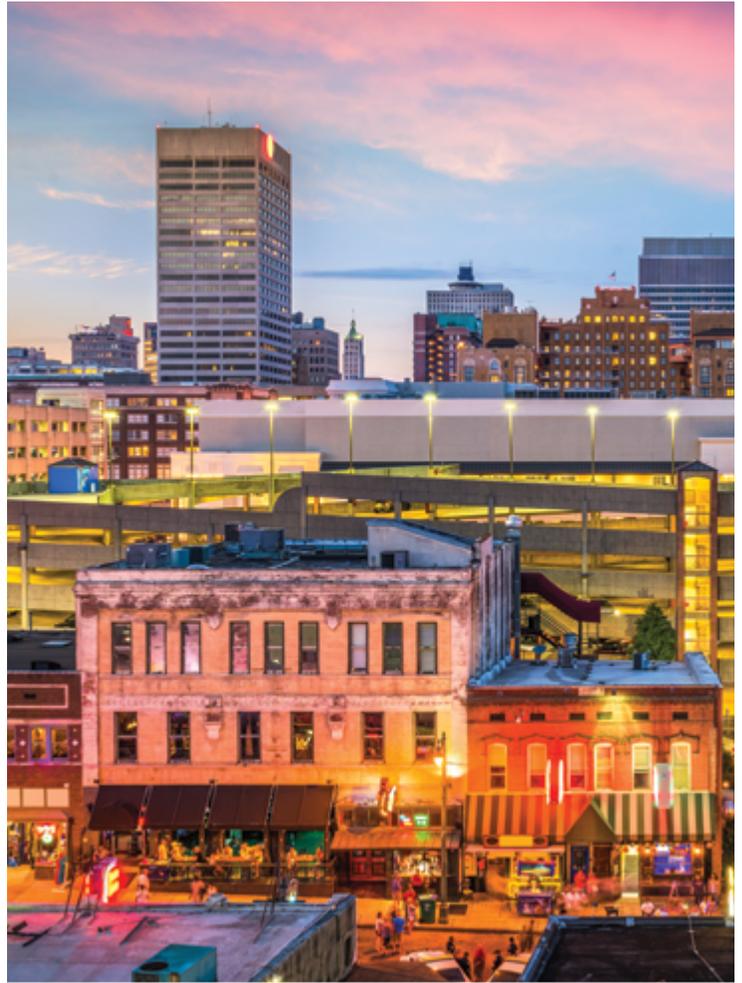
COLLEGE OF PHARMACY

MEMPHIS, TENNESSEE

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PharmD/PhD Dual Degree Program

OBJECTIVES

The objective of the PharmD/PhD dual degree program at the University of Tennessee Health Science Center (UTHSC) College of Pharmacy is to train qualified pharmaceutical scientists for academic and industrial positions. This innovative program for highly qualified applicants is designed to reduce the total time needed for completion while maintaining the high standards for both programs individually. It is intended to increase the number of highly trained clinician-researchers that can operate at the interface of basic research and clinical care to facilitate a faster translation of medical innovations into benefits for patients.

RATIONALE AND NEED

The impetus and rationale for the development of a PharmD/PhD dual-degree program has been reviewed in the Executive Summary of a study commissioned by the American Association of Colleges of Pharmacy entitled "Graduate Education in the Pharmaceutical Sciences: The Quest for Quality." The report stated:

"The challenges facing the graduate education component of the pharmaceutical education enterprise are greater than at any time in its history. Paradoxically, they result from the great success research and graduate education in the pharmaceutical sciences has enjoyed in the last several decades as evidenced by the explosive growth in the utilization of pharmaceutical scientists in the pharmaceutical and related industries."

The UTHSC College of Pharmacy is committed to increasing the number of comprehensively educated pharmaceutical scientists. Students who are accepted into the dual-degree program and demonstrate acceptable progress may expect to receive the PharmD and be eligible for licensure as a pharmacist after completing four years of the program. The remaining portion of the program will require approximately 3-3.5 additional years to complete the requirements of the PhD, with the total time depending on the student's background and progress. Overall, the program is designed to reduce the time normally required for a student to complete both degrees.

PharmD/PhD Program

REQUIREMENTS FOR ADMISSION

1. An applicant must first be admitted to the PharmD program at the UTHSC College of Pharmacy. For admission criteria and process please see uthsc.edu/pharmacy/prospective-students/index.php.
2. An applicant must hold a B.S. or a B.A. degree in one of the sciences, or must have completed three years of education at a college or university which will grant a B.S. or B.A. after completion of one additional year of education at the UT College of Pharmacy. Preference will be given to applicants who have completed one year of physical chemistry and one year of calculus. Additionally, courses in biochemistry, human anatomy, analytical chemistry, microbiology, advanced mathematics, and advanced organic chemistry are desirable but not required.
3. An applicant must have a minimum grade point average of 3.0 on a 4.0 scale.
4. An applicant must have a Graduate Record Examination (GRE) minimum of 300 (verbal and quantitative on the revised general test) and 3.5 on the analytical section.
5. Prior research experience, although not required, is strongly encouraged.

PharmD/PhD Program

APPLICATION PROCESS

- For applicants interested in the program, a meeting with the PharmD/PhD program director is recommended. If possible, this should be scheduled at the time of your interview for the PharmD program.
- Students considering the PharmD/PhD program are required to be based on the Memphis campus.
- An applicant must first be admitted to the PharmD program at the UTHSC College of Pharmacy. After receiving confirmation of admission, the applicant should contact the PharmD/PhD Program Director, who will provide an APPLICATION FOR ADMISSION TO THE PHARMD/PHD PROGRAM FORM (Attachment I).
- The application receipt deadline is April 1. The application should include:
 - The completed application form.
 - A personal statement why the applicant wants to pursue the PharmD/PhD dual degree program.
 - A description of previous research experience, including a letter from a previous research advisor if available.
 - GRE score

Application material already submitted for the application for admission to the PharmD program does not have to be resubmitted.
- Each applicant will be interviewed individually by the PharmD/PhD program director.
- The program director and the Graduate Committee will review the application and will make recommendations for admission.
- Applicants will be notified by May 1 on the success of their application.
- The application provides the student an opportunity to express interest(s) in specific research areas. This information will be utilized by the Program Director to tailor the student's research experience(s) during the summer preceding the 1st year of pharmacy school. Typically, the student will have three (3) different research experiences (rotations) lasting 3-4 weeks each. The total length for the summer research experience is nine (9) weeks at \$400 per week. Students who need to complete PharmD prerequisites during the summer prior to their 1st professional year are required to inform the Program Director as early as possible to discuss summer rotation scheduling modifications.
- Students enrolled in any later year of the PharmD program at the UTHSC College of Pharmacy may also apply for admission to the PharmD/PhD program using the outlined process and timelines.



PharmD/PhD Program

CURRICULUM

COURSE WORK

All dual degree students are required to complete minimum requirements for the PharmD degree as outlined on the website of the **PharmD program**. In addition, students are expected to make significant progress toward completion of the PhD coursework requirements for their respective programs.

The PharmD curriculum has been modified to facilitate integration of the PharmD and PhD programs as follows:

1. Students may take PhD coursework to satisfy the elective requirements of the PharmD program.
2. Selected PharmD courses in the P1 and P2 year have been modified to include additional instructional materials to permit students to obtain PhD credit for these courses:
 - PHAC 808 Research in Pharmaceutical Sciences
 - PHAC 827 Pharmacokinetics and Dose Optimization for Pharmacokinetics & Dose Optimization

Complete PhD coursework requirements for the programs in Pharmaceutical Sciences can be found in the **Graduate Student Handbook** and for the program in Health Outcomes and Policy Research at the **program website**.

CLINICAL ROTATIONS

Students are required to take a minimum of eleven (11) months of Advanced Practice Professional Experiences (APPE) and complete the required Introductory Pharmacy Practice Experiences (IPPE).

RESEARCH EXPERIENCE

Once admitted, students will begin the program the summer prior to the fall semester of their first year in the PharmD program. During this summer the student will work with College of Pharmacy faculty members to obtain an overview of the research programs in the College, as well as to gain initial experience in conducting research. The assignments will be based on the student's interest in the various areas of research in the College in which graduate education is offered, i.e., Health Outcomes and Policy Research, Medicinal Chemistry, Pharmaceutics, Bioanalysis, and Pharmacometrics.

During the fall and spring semesters of the P1 and P2 professional year and the fall semester of their P3 professional year PharmD/PhD students are required to work for a minimum of 8 hours per week in the research setting of their advisor. A mechanism to receive academic credit for this work in research techniques and skills is currently being implemented through PHAC 808.

During the summer semester after completion of the P1 and P2 year, students are expected to work in the research setting of their advisor a minimum of 40 hours per week for eight (8) weeks at \$400 per week.

Note: These time commitments represent minimums, and students are encouraged to work in the laboratory as much as possible to reduce the total time required to complete the Dual-Degree Program.

Dual degree students will receive the PharmD degree following the P4 professional year assuming all degree requirements have been fulfilled. Students will matriculate to the College of Graduate Health Sciences upon receipt of the PharmD degree.

ACADEMIC ASSESSMENT AND PROGRESSION

in the PharmD/PhD Program

RESEARCH ADVISOR

Ideally by the end of the summer, but at the latest by the end of the Fall semester in the P1 year, students will identify and begin work with a Research Advisor. The student will meet with his/her Research Advisor before each semester to develop his/her course schedule.

Prior to selection of a Research Advisor, students will report to the Program Director, and the Program Director will meet with the student to develop a course schedule.

All dual degree students must complete and submit the **PharmD/PhD STUDENT SUMMARY FORM** (Attachment II) to the Director of Graduate Programs by the end of their first semester in the program.

PROGRESS ASSESSMENT

Students must maintain a minimum overall GPA of 3.0 throughout the entire Program. If a student's overall GPA falls below 3.0 for two consecutive semesters, is below 3.0 at the completion of the PharmD portion of the Program, or if a student receives a grade of D or F in any course, the student will be ineligible to continue in the Program. However, students will be eligible to complete the PharmD program if their academic standing meets the minimum requirements of the College of Pharmacy as stated in the UTHSC Centerscope Student Handbook for the College of Pharmacy.

Each student must have a formal meeting with his/her research advisor each semester. A current grade summary will be provided by the student to the advisor prior to the meeting. The purposes of the meetings are to ensure that

1. grades in course work are satisfactory,
2. course requirements and other requirements for the program are being met,
3. expertise in the conduct of research is being developed,
4. participation in other activities required of graduate students, such as seminar and journal club, is satisfactory
5. any extra-service work or other activities are not interfering with progress in the program.

The **PharmD/PhD STUDENT SEMESTER ASSESSMENT FORM** (Attachment III) will be completed by the Research Advisor. A copy will be retained by the Program Director.

If progress is judged unsatisfactory, students will receive a written notice of deficiencies (first written notice). A second written notice may be issued if deficiencies persist and will result in the student being placed on academic probation. Failure to improve to the satisfaction of both the Research Advisor and the Graduate Committee after the second such notice will result in dismissal from the Program.

FINANCIAL SUPPORT

Each student admitted to the program receives a summer stipend for up to \$4,000. The summer stipend covers the 10 week research experience for the summer prior to the P1 fall semester.

For the additional 10 week summer research experiences after completion of the P1 and the P2 years, a similar summer stipend (up to \$4,000 for 10 weeks) will only be paid if the corresponding funds are provided by the student's Research Advisor.

Students enrolled in the PharmD/PhD program are also eligible to apply for the UTHSC College of Pharmacy PharmD/PhD Scholarship which is awarded once per year on a competitive basis to a student that has demonstrated academic excellence in coursework and research in the pursuance of his/her degrees. A description of the scholarship is provided in Attachment IV.

PharmD/PhD students are strongly encouraged to apply for other scholarship and grant opportunities that are specifically designed for PharmD/PhD students, for example from the National Institutes of Health, the American Foundation for Pharmaceutical Education, and others. Please contact the Program Director for details.

OTHER APPLICABLE POLICIES

Once a student becomes a full-time PhD student, all applicable policies of the respective graduate program (Pharmaceutical Sciences or Health Outcomes and Policy Research) as well as the College of Graduate Health Sciences apply.

SPECIFIC POLICIES FOR THE GRADUATE PROGRAM IN PHARMACEUTICAL SCIENCES

POLICY ON ENROLLMENT, PARTICIPATION, AND GRADING OF THE DEPARTMENTAL SEMINAR SERIES

Seminar/Journal Club participation is an integral part of the Graduate Program in Pharmaceutical Sciences. This comprises the Department of Pharmaceutical Sciences Seminar Series, as well as Graduate Student Journal Clubs in Bioanalytical Chemistry, Medicinal Chemistry, and Pharmaceutics.

Students must enroll in either PHAC819/MEDC819 or PHAC919/MEDC919 each semester. Enrollment in PHAC819/MEDC819 requires graduate students to regularly attend seminar presentations and actively participate in discussions and Q&A sessions. PHAC819/MEDC819 will be graded as "PASS/FAIL". Unexcused absences of more than 20% of the monitored seminar presentations or 20% of the Graduate Student Journal Clubs will result in a 'FAIL' grade.

Department of Pharmaceutical Sciences Seminar Series attendance is mandatory for all PharmD/PhD dual degree students during the PharmD section of the curriculum. Non-participation of PharmD/PhD students requires permission of the Program Director.

OUTSIDE WORK OF DUAL-DEGREE STUDENTS

PharmD/PhD students in the Pharmaceutical Sciences Graduate Program are discouraged from working for pay outside of their responsibilities as a student. Outside employment, either within or outside the University, may affect performance in course work, will decrease the time the student is able to devote to their research, and can extend the time required to complete the degree requirements.

Students will be required to disclose their outside work schedule, and the type of work they have engaged in during each semester, at the time of their scheduled progress assessment at the end of each semester. A student who is not making adequate progress will be required to restrict or eliminate outside employment, or risk possible dismissal from the program.

ATTACHMENTS

ATTACHMENT I: APPLICATION FOR ADMISSION TO THE PHARMD/PHD DUAL DEGREE PROGRAM

ATTACHMENT II: PharmD/PhD DUAL DEGREE PROGRAM STUDENT SUMMARY

To be completed by Program Director/Research Advisor

ATTACHMENT III: PharmD/PhD DUAL DEGREE STUDENT SEMESTER ASSESSMENT FORM

To be completed by Program Director/Research Advisor

ATTACHMENT IV: UTHSC COLLEGE OF PHARMACY PharmD/PhD SCHOLARSHIP

APPLICATION FOR ADMISSION to the PharmD/PhD Dual-Degree Program

GENERAL INFORMATION

Name: _____ Student ID #: _____

Permanent Home Address: _____

Memphis Address: _____

Memphis Telephone: _____

Email Address: _____

PharmD Admission Date: _____ PharmD Entry Date: _____

Undergraduate Degree(s): _____

Signature: _____ Date: _____

STUDENT SUMMARY

for the PharmD/PhD Dual-Degree Program

Name: _____ SS number: _____

Birth Date: _____ Gender: _____ Race: _____ Nationality: _____

Date of Entry into Dual Degree Program: _____

Previous Schools and Degrees

Entering: GRE

Verbal Analytical Quantitative **Total**

GPA: _____ PCAT: _____ TOEF: _____ TSE: _____

Faculty Advisor (Date Selected): _____

PharmD/PhD Dual-Degree

STUDENT SEMESTER ASSESSMENT FORM

COMPLETE AT THE END OF THE FALL AND SPRING SEMESTERS

Student: _____ Program Dir./Research Advisor: _____

Semester: _____ Date: _____

PAST SEMESTER: A response of no to A or B requires an attached explanation and recommended plan of action

A. Have the course objectives agreed to last semester been met?

B. Have the research objectives agreed to last semester been met?

CURRENT SEMESTER

C. Courses to be completed during this semester.

D. Specific research objectives for this semester.

STUDENT COMMENTS ABOUT THE PROGRAM

Student Signature: _____ Date: _____

Advisor Signature: _____ Date: _____

Chair Signature: _____ Date: _____

UTHSC College of Pharmacy

PharmD/PhD SCHOLARSHIP

PURPOSE OF THE SCHOLARSHIP

The scholarship is intended to support students admitted to the PharmD/PhD program at the UTHSC College of Pharmacy that have demonstrated academic excellence in coursework and research in the pursuance of their degrees.

ELIGIBILITY

Students that have achieved full admission to the PharmD/PhD program, are P1, P2 or P3 students, are in good academic standing as outlined in the program handbook, and have entered the PharmD/PhD program in 2012 or later. Students may reapply for the scholarship in subsequent years as long as they fulfill the eligibility criteria, even if they received the scholarship in previous years.

AWARD

The scholarship consists of one \$6,000 award paid out in two installments in the Spring and Fall semester.

TERMS

The scholarship is awarded on a competitive basis. The payout of the scholarship requires students to maintain enrollment in the PharmD/PhD program and good academic standing as outlined in the program handbook.

APPLICATION

The application packet should consist of:

1. **Statement of career goals** (maximum of two pages in length),
2. **Reference letters** (two); preferably from individuals that can comment on a student's potential for success in research,
and
3. **Curriculum vitae.**

The application packet should be submitted to the Associate Dean for Graduate Studies on or before December 31. Applications will be reviewed by the Graduate Committee and the awardee will be notified no later than January 31.

REVIEW CRITERIA

The following represents the list of criteria used to evaluate applications:

1. **Statement of Career Goals** (30%)
2. **Academic performance** (30%)
3. **Research experience** (20%)
4. **Reference letters** (20%)



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