Pharmaceutical Sciences: Pharmaceutics Option - PhD

The Auburn University Harrison School of Pharmacy offers interdisciplinary MS and PhD degree programs in Pharmaceutical Sciences. Those pursuing one of these degrees must select one of four curricular options: 1) Medicinal Chemistry, 2) Pharmaceutics, 3) Pharmacology, or 4) Health Outcomes Research and Policy.

The Medicinal Chemistry, Pharmaceutics and Pharmacology options are designed for students interested in the drug discovery or development processes, and are affiliated with the Department of Drug Discovery and Development. Areas of interest include neurodegenerative diseases, cardiovascular diseases, infectious diseases, cancer, diabetes and other metabolic diseases, synthetic organic chemistry, forensic analytical chemistry and drug delivery, disposition and formulation.

The Health Outcomes Research and Policy option is designed for students interested in studying healthcare delivery, medication use and outcomes. This option is affiliated with the Department of Health Outcomes Research and Policy.

Note that courses used to fulfill program core requirements may also be used to fulfill option specific requirements.

The PhD program requires a minimum of 60 semester hours earned through instruction beyond the bachelor’s degree including 1) a minimum of 30 semester hours graded (e.g. A, B) graduate course work (6000 - 8999); and 2) a minimum of 30 semester hours of additional graduate course work (6000 - 8999) that may include ungraded courses, and must include at least 10 hours of research and dissertation. A general examination, often called the preliminary examination, is required of all applicants for the degree of doctor of philosophy. It consists of written and oral testing. The student becomes a candidate for the degree upon successful completion of the general examination. Students working on the dissertation, submitting their dissertation or awaiting approval of their final examination must register for Research and Dissertation in the semester(s) when these steps occur. Candidates for the PhD degree must complete a dissertation proposal and successfully defend their proposal during the final examination.

For the PhD program, students must complete a core curriculum outlined below.

### Scientific Communications (Six credits required)
- PYPC 8950 Seminar (may be repeated multiple times for credit)
- PYPS 8950 Seminar (may be repeated multiple times for credit)
- PYPS 7000 Introduction to Grant Writing

### Data Analyses and Interpretation (Six credits required)
- ERMA 7300/7306 Design and Analysis in Education I
- ERMA 7310/7316 Design and Analysis in Education II
- MNGT 8400 Advanced Quantitative Methods for Management I
- PYPS 7010 Pharmacokinetics
- PYPS 7030 Drug Products and Biopharmaceutics
- PYPS 7230 Advanced Medicinal Chemistry I
- PYPS 7240 Advanced Medicinal Chemistry II
- PYPS 7340 Organ Systems Pharmacology I
- PYPS 7350 Organ Systems Pharmacology II
- PYPS 7360 Cellular & Molecular Pharmacology & Toxicology I
- PYPS 7370 Cellular & Molecular Pharmacology & Toxicology II
- STAT 7000 Experimental Statistics I
- STAT 7010 Experimental Statistics II

### Experimental Design (Six credits required)
- PYPC 8990 Research and Dissertation
- PYPS 8990 Research and Dissertation

### Option specific requirements for PhD students pursuing the Pharmaceutics option include:
- PYPS 7010 Pharmacokinetics
- PYPS 7030 Drug Products and Biopharmaceutics
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>PYPS 8950</td>
<td>Seminar (may be repeated multiple times for credit)</td>
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<tr>
<td>PYPS 8990</td>
<td>Research and Dissertation (total of 10 CR required)</td>
<td>10</td>
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In addition to the specific core and option course requirements listed above, students must complete instructor approved graduate electives (6000-8999) to reach the 60 hour degree requirement.