It’s an exciting and demanding time for healthcare. In response, the Purdue University Department of Industrial and Physical Pharmacy endeavors to improve drug-based therapies and diagnostics. To do this, we need high-caliber graduate students. The Purdue program offers students a wide arena in which to conduct research with the goal of enhancing human health. By improving the pharmaceutical development and manufacturing processes, graduate students take an active role in the ultimate goal: reducing the time it takes for medicines to hit the pharmaceutical market.

Developing an effective dosage form requires knowledge of pharmaceutical material science, pharmaceutical formulation and processing, novel drug delivery systems, biopharmaceutics and pharmacokinetics. Research projects within the department range from biological (e.g., gene delivery) to physical (e.g., pharmaceutical engineering of materials and solid state chemistry at nano to micron scales).

The broad spectrum of research interests within one academic department provides our graduate students with an unparalleled opportunity to work in an intellectually stimulating research environment.
INTERNATIONAL OPPORTUNITIES

Globalization of Pharmaceutics Education Network (GPEN) provides graduate students exposure to science and culture at the international level.

Exchange program with the Université Louis Pasteur, Strasbourg, France.

BACKGROUND REQUIREMENTS

Subject backgrounds suitable for graduate study in pharmaceutics are pharmacy, pharmaceutical sciences, life sciences, physical sciences and engineering. Requirements for entry into the Ph.D. program are a B.S. or M.S. in an appropriate discipline.

LIFE AT PURDUE

Purdue University, a public land-grant university, is located in West Lafayette, Ind., just 1.25 hours north of Indianapolis and 2.5 hours south of Chicago.

Shuttle service to the Chicago and Indianapolis airports. Passenger train service to Chicago.

The cost of living in West Lafayette is low and the department offers research and teaching assistantships that provide salary, tuition waivers and health benefits.

The diverse academic and cultural backgrounds of our graduate students create an excellent environment for personal as well as intellectual growth.

NETWORKING WITH INDUSTRY PROFESSIONALS

- Opportunities for research and industry internships with pharmaceutical industry partners.
- Pharmaceutical processing research.
- NSF Engineering Research Center on Structured Organic Particulate Systems (C-SOPS).
- Lilly Endowment for Preeminence for Pharmacy and Pharmaceutical Sciences.
- Weekly departmental seminars provide graduate students with opportunities to meet and interact with pharmaceutical industry experts and faculty from other research universities.

INDUSTRY PROFESSIONALS

Nate Milton, Ph.D. – Research advisor, Formulation & Process Development, Eli Lilly and Company

My training in the Department of Industrial and Physical Pharmacy helped me to develop critical thinking skills, be competitive in industry, and establish valuable professional and personal relationships. As a result of my Purdue education and the supportive faculty in IPPH, I have opportunities to contribute to the scientific community as well as contribute to the development of others.

Nina S. Cauchon, Ph.D. – Director, Pharmaceutics, Amgen Inc.

My graduate coursework and research program in Purdue University’s College of Pharmacy covered all aspects of drug development, from the study of natural products and the beginnings of medicinal chemistry to modern drug design, dosage forms and delivery systems. Advanced analytical techniques in separations science, spectroscopy and physico-chemical characterization have also proven invaluable in helping develop cutting-edge therapeutics to alleviate human suffering. The breadth and depth of the knowledge I gained as a result of my studies, and the philosophy of continual learning instilled in me by the Purdue professors, has served to prepare me for a successful career in the pharmaceutical industry.

Tonglei Li, Ph.D. – Faculty member, University of Kentucky

My experiences being a student at Purdue University were invaluable. Not only did I have the opportunity to work with the world’s top scientists, but I was exposed to the forefront in pharmaceutical research as well. The course work was comprehensive, intensive and up to date; the research environment was second to none. More important, I was given a tremendous degree of freedom and was able to pursue an area in which I was interested. The guidance by the faculty was so enlightening for my career development that, without their support, I could not be where I am today and do what I enjoy the most.