RESEARCH AREAS

Advanced Methods of Analysis
Drug Delivery
Drug Stability
Drug Transport
Manufacturing Science
Materials Science
Modeling
Nanomedicine
Pharmaceutical Biotechnology
Pharmaceutical Engineering
Pharmaceutics
Pharmacokinetics and Metabolism
Solid State Chemistry
SUMMARY OF FACULTY RESEARCH INTERESTS

PHARMACEUTICAL SOLIDS FORMULATION
- Stephen R. Byrn (Charles B. Jordan Professor) - solid state formulation and stability of small molecules
- Keith Chadwick (Assistant Professor) - heterogeneous nucleation, control of polymorphism
- Tonglei Li (Allen Chao Chair and Professor) - intermolecular interaction and crystal packing, nucleation and phase transition, computation and visualization
- Lynne E. Taylor (Dexter Professor of Pharmacy) - amorphous solids, role of moisture in pharmaceutical solids, development of analytical methods to characterize solids
- Elizabeth M. Topp (Dane O. Kildsig Chair and Dept. Head) - solid state formulation and stability of biologics, control of protein aggregation

PHARMACEUTICAL SOLIDS MANUFACTURING
- Stephen R. Byrn (Charles B. Jordan Professor) - regulatory science, Sustainable Medicines in Africa
- Rodolfo Pinal (Associate Professor) - layer-by-layer assembly of solid dosage forms
- Qi "Tony" Zhou (Assistant Professor) - particle engineering, advanced manufacturing of solid dosage forms

PHARMACEUTICAL SOLIDS DELIVERY & BIOPHARMACEUTICS
- Raymond E. Gallwey (Professor) - mechanisms of drug interactions, influence of altered physiology on pharmacokinetics and pharmacodynamics
- Gregory T. Kripp (Associate Professor) - oral drug delivery, peptide transporters in the GI tract, porcine model for oral formulations, pediatric drug delivery
- Tonglei Li (Allen Chao Chair and Professor) - development and delivery of nanocrystal-based therapeutic, and bioimaging systems
- Kinam Park (Professor, Showalter Distinguished Professor of Biomedical Engineering) - controlled release, nano/micro particles, polymer micelles, fast dissolving tablets, hydrogels
- Yoon Yeo (Associate Professor) - particle engineering, nanoparticles, drug delivery in cancer, drug delivery to lung
Subject backgrounds suitable for graduate study in pharmaceutics are pharmacy, pharmaceutical sciences, life sciences, physical sciences, and engineering.

Requirements for entry into the PhD program are a BS or MS in an appropriate discipline.