PPD: PHARMACEUTICAL PRODUCT DEVELOPMENT

Courses

PPD 481. Drug Design I. 3 Credits.
The first course in a three-semester sequence provides an overview of the pharmaceutical industry and the drug development process, followed by an in-depth study of the clinical trials portion of the process. Statistical design used in trials for demonstrating drug safety and efficacy are discussed. The role of IRBs, informed consent, and other medical legal issues are explored.
PPD 481 Corequisite: STA 311.

PPD 482. Drug Design II. 3 Credits.
A course emphasizing pharmacokinetic and toxicokinetic aspects of drugs. Sites and mechanisms of drug reaction and drug metabolism are discussed. Drug toxicology is also explored in depth. Laboratory therapeutic drug monitoring as a measure of improving drug efficacy is considered.
PPD 482 Prerequisite: Successful completion of BIO 367 and PPD 481, with minimum grades of D-.

PPD 483. Drug Design III. 3 Credits.
This course emphasizes the discovery portion of drug development and illustrates the major concepts in medicinal chemistry. The scientific tools used such as high throughput screening, genomics and computational chemistry, are considered. Criteria for making a compound workable as a drug are discussed, and the selection of the administration route is reviewed.
PPD 483 Prerequisite: Successful completion of BIO 367, BIO 469, and PPD 482, with minimum grades of D-.

PPD 484. Pharmaceutical Internship I. 1 Credit.
A summer, paid internship experience with a pharmaceutical or biotechnology company. These internships are designed to provide experiences in key aspects of the pharmaceutical industry. Students will be supervised jointly by an on-site professional scientist and a member of the Pharmaceutical Product Development Program Committee.
PPD 484 Prerequisite: A minimum 2.75 cumulative GPA, or department consent.

PPD 485. Pharmaceutical Internship II. 1 Credit.
A second summer paid internship experience with a pharmaceutical or biotechnology company. These internships are designed to provide experiences in key aspects of the pharmaceutical industry. This experience will be designed to complement the experience gained from PPD 484.
Repeatable for credit.

PPD 490. Special Topics in Drug Development. 1 Credit.
This special topics course is designed to offer in depth seminars about novel and exciting areas of research in the field of pharmaceutical product development and drug discovery. Invited speakers will be industry experts presenting the most up-to-date information about their areas of expertise.
PPD 490 Prerequisite: PPD 481, with a minimum grade of D-. Corequisite: PPD 483.
Repeatable for credit.