

## Concentration - Discovery & Development

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### **B.S. in Pharmaceutical Sciences**

#### **Description**

The B.S.P.S. degree may be taken as a practice or a nonpractice track. The practice track is designed to prepare a student for entry into the Pharm.D. professional program. The nonpractice tracks are designed to prepare a student for a pharmacy-related career (e.g., research or marketing) or graduate school.

**Minimum Total Credit Hours: 142**

#### **Goals/Mission Statement**

On the baccalaureate level, the school shall foster an environment where students can learn and apply the principles and theories related to the pharmaceutical sciences and acquire the knowledge, skills, and attitudes in their chosen discipline such that each can enter and succeed in a professional career in the pharmaceutical sciences, or continue studies in areas including, but not limited to, the Doctor of Pharmacy program or graduate studies in the pharmaceutical sciences.

#### **General Education Requirements**

The general education/core requirements for the B.S.P.S. degree include Engl 101 and Engl 102/Liba 102; Bisc 160, 161, 162, 163; Chem 105, 115, 106, 116, 221, 225, 222, 226; Phys 213, 223, 214, 224; Math 261; Spch 102 or 105; Econ 202; Math 115; 6 hours of behavioral/social sciences; 9 hours of humanities and fine arts, with at least 3 hours from each area.

#### **Course Requirements**

The third year (P3, the first professional year) requirements include Phcl 341 and 342 (Human Physiology/Pathophysiology), Phcl 343 (Biochemical Foundations of Therapeutics); Phar 330 (Pharmaceutical Calculations), Phar 331 and 332 (Basic Pharmaceutics); Phad 391 and 392 (Pharmacy Administration); Prct 350 (Pharmacy Orientation); Medc 317 (Pharmacogenetics and Pharmacoinmunology); and Phil 326 (Pharmacy Ethics).

Students must then complete either the fourth year (P4) practice track or one of the P4 nonpractice tracks; course requirements for P4 are described on the track sections.

### **Track - Nonpractice Curricular Tracks**

#### **Description**

Completion of a B.S.P.S. nonpractice track (P4 year) may occur in the following areas of concentration-medicinal chemistry, pharmacology/toxicology, or drug discovery and development.

#### **Goals/Mission Statement**

The nonpractice track curricula are designed to provide sufficient background in a pharmaceutical science discipline to prepare the student for entry into a graduate degree program (M.S. or Ph.D.) in that respective discipline. They provide career preparation for students interested in pharmacy-related careers, but not desiring to become pharmacists.

#### **General Education Requirements**

General education course requirements are covered in the first two years of the B.S.P.S. degree program. Entry into each concentration consists of successful completion of the first three years of the B.S.P.S. degree program, followed by competitive admission.

#### **Course Requirements**

The nonpractice track curricula for concentrations in medicinal chemistry, pharmacology/toxicology, or drug discovery and development are identical to the practice track curriculum for the first three years, but differ dramatically in the fourth year. The required P4 courses are detailed under the specific concentrations.

### **Concentration - Discovery & Development**

#### **Description**

The concentration in drug discovery and development consists of the first three years in the B.S.P.S. curriculum followed by completion of the fourth-year curricular track as outlined below.

#### **Goals/Mission Statement**

The graduate of this track will be prepared to enter a graduate program emphasizing drug discovery and development with particular expertise in natural products.

#### **General Education Requirements**

Refer to general education requirements for the B.S.P.S. degree.

#### **Course Requirements**

Requirements for this concentration are completion of the first professional year (P3) curriculum in the B.S.P.S. program followed by Phcl 443 and 444 (Basic and Clinical Pharmacology); Medc 416 and 417 (Introduction to Principles of Medicinal Chemistry); Phcg 421 (Pathogenesis and Etiology of Infectious Diseases); Phcg 422 (Natural Product-derived Pharmaceuticals); Phcg 427 and 428 (Drug Discovery); Phcg 543 and 544 (Seminar on Topics of Interest in Natural Products Chemistry); Phcg 429 (Botanicals and Traditional Medicine); 6 hours of approved electives.

#### **Other Academic Requirements**

Admission: Competitive admission to this lecture and laboratory track is limited by the availability of space and will depend on the student meeting the specific requirements below. a) A minimum GPA of 2.75 obtained on all courses completed during the third year (P3) of the B.S.P.S. curriculum or approval by the departmental faculty. b) A letter of application indicating the reasons for selecting this track and how it fits into the applicant's future goals along with a successful interview conducted by the departmental faculty.

