BSPS Majors

The Bachelor of Science in Pharmaceutical Sciences (BSPS) program at The University of Toledo is one of a kind in the nation when compared to similar programs in other pharmacy colleges. Unlike similar programs, the BSPS program at UT includes a 10-week internship placement at the end of the third year of study. Prior to completing the internship, students participate in a Professionalism Institute wherein they learn about teamwork, ethics, effective communication and problem solving. UT's BSPS graduates are among the most highly sought after in the nation because of the training and expertise they gain in their course work and internships.

The mission of the College of Pharmacy and Pharmaceutical Sciences is to educate students to become pharmacists and pharmaceutical scientists while advancing pharmaceutical knowledge. Guiding principles are personal integrity, respect for humanity and human diversity, and professionalism.

BSPS
International
Cosmetic Science
Pharmacology
Business
Pharmaceutics
Administration
Medicinal and Biological Chemistry

COLLEGE OF PHARMACY AND PHARMACEUTICAL SCIENCES
THE UNIVERSITY OF TOLEDO

Companies where BSPS students complete internships include:

Abbott Laboratories
Advancis
Advocare
Baxter Healthcare
Buderer Drug Co.
Cincinnati Children's Hospital
The Cleveland Clinic Foundation
CVS/Caremark
Fisher Scientific International
Charles Rivers Laboratories
Cordelia Martin Community Health Center
Cuyahoga County Coroner
Discount Drug Mart
E. Kenneth Hatton, MD, Institute for Research
Eli Lilly
EnvisionRx
Fresh Products
Forrest Pharmaceuticals
Good Samaritan Hospital
Kmart
Lucas County Coroner
Medco Health
The Medicine Shoppe
Metro Health Medical Center
Michigan State Police
Mylan Labs Inc.
Lake Erie Research Center
NAMSA
National Science Foundation
Pfizer
Pharmaceutical Horizons
Pharmacy Association of Ohio
The Pharmacy Counter
Pharmacy Systems Inc.
Pharmerica Corporation
Procter & Gamble
Sterling Labs
Toledo Hospital
Total Therapeutic Mgmt.
University of Szeged
Virtuadrug Ltd.
Walgreens
Wil Research Lab

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Bachelor of Science in Pharmaceutical Sciences
at The University of Toledo

The Bachelor of Science in Pharmaceutical Sciences (BSPS) is a four-year baccalaureate program designed for students who wish to pursue careers related to the pharmaceutical industry, pharmaceutical research, management and sales, the biomedical industry, forensic science, and health care administration. Students who earn the BSPS degree are prepared to enter several industries including business, health care administration and the sciences. The BSPS program also prepares students to enter medical school, law school, or graduate programs in the health sciences.

UT is a leader in offering the Bachelor of Science in Pharmaceutical Sciences degree; only few such programs are offered in the nation. The increasing demand for scientists, researchers, administrators, and professional sales representatives in the pharmaceutical fields makes the BSPS program a great start to a lucrative and rewarding career.

The University of Toledo College of Pharmacy and Pharmaceutical Sciences features state-of-the-art facilities, including a newly-constructed building on the University's Health Science Campus. The college's faculty members are recognized authorities in their areas of specialization, conducting research that contributes to the development of new drug therapies, practices, and innovations.

DESIGN DRUGS

Medicinal and Biological Chemistry is an interdisciplinary science. This major focuses on synthetic organic chemistry, biochemistry, molecular biology, biotechnology, pharmacology, and pharmaceutical chemistry underlying the design, synthesis, and development of drugs. The curriculum includes courses in medicinal chemistry, biochemistry, applied drug design, physiological chemistry and pharmacology.

Medicinal and Biological Chemistry students are prepared for careers as drug analysts, research chemists, technical writers, biochemistry technical officers, and forensic scientists. Professional chemists are in demand in industry, education, business, and research organizations as well as the public sector. Graduates are able to enter graduate programs in the field of medicinal and biological chemistry, as well as medical school or other professional schools.

TEST DRUGS

Pharmacology and Toxicology are biomedical sciences that explore how to develop safe, effective drugs and prevent the harmful effects of chemicals. Pharmacology focuses on the way drugs interact with various living systems that includes the properties, effects, and mechanisms of drug action. Toxicology focuses on the interaction of toxic compounds in the body, which includes exposure assessment, dose response assessment, and hazard identification. The curriculum includes courses in medicinal chemistry, applied drug design, physiological chemistry, toxicology, and pharmacology.

Pharmacology/Toxicology students are prepared for careers in the biomedical industry, pharmaceutical industry, nutritional industries, environmental conservation and pollution control, scientific civil service, governmental agencies, forensic sciences, and research institutes. Graduates often pursue graduate study in pharmaceutical sciences, medicine, veterinary medicine, and biomedical sciences.

FORMULATE DRUGS

Pharmaceutics is a multidisciplinary applied science that explores the physical and chemical attributes of drugs. It places a strong emphasis on the design and evaluation of drug delivery systems and dosage forms and the effect they have on patients' responses to drug therapy. The curriculum includes courses in medicinal chemistry, applied drug design, physiological chemistry, analytical chemistry, cell biology, microbiology, immunology, pharmacology, biopharmaceutics, and pharmaceutical calculations.

Pharmaceutics students are prepared for careers as drug analysts, manufacturing/production technologists, quality control inspectors, technical writers, and research associates in the pharmaceutical industry, cosmetic industry, hospitals, and university settings. Graduates can pursue graduate study in pharmaceutics, industrial pharmacy, medical school, or other professional schools.

FORMULATE BEAUTY PRODUCTS

Cosmetic Science is the interdisciplinary science involved in developing, formulating and producing cosmetics and personal care products. This major places a strong emphasis on the underlying design, synthesis, and development of products associated with the personal care along with the beauty and welfare of people and their animal companions. The curriculum includes courses in synthetic organic chemistry, biochemistry, molecular biology, biotechnology, pharmacology and pharmaceutical chemistry.

Students in cosmetic science will be prepared for careers as cosmetic chemists, research chemists, technical writers, cosmetic marketing representatives and product developers. Professional cosmetic scientists are in demand in the industry, research and the public sector, including large and small pharmaceutical companies, cosmetic companies, laboratories and the chemical industry. Graduates will be skilled in developing new and novel products or improving existing ones along with assessing the quality, durability, safety and packaging compatibility of products developed. With their business and economic knowledge, they will be equipped to understand business models and the necessity for team interaction in the development of a commercial product. The broad base on which the major is structured does not limit employment to pharmaceutical or cosmetic options, allowing students to compete for positions requiring a knowledge of chemistry. Graduates are also able to move on to graduate programs in the field, medical school or other professional schools.

THE BUSINESS OF HEALTHCARE

The **Pharmacy Administration** major will be taking on a new look in the coming year. The degree is focused on the business of healthcare, and will refocus to include healthcare outcomes, health economics, and healthcare data and systems analysis. Pharmacy Administration students have significant analytical training, coupled with a strong scientific foundation. The major requires courses in economics, the pharmaceutical sciences and health outcomes analysis.

Pharmacy Administration majors are prepared for careers in the rapidly expanding healthcare insurance industry, managed care, pharmaceutical and medical manufacturing, marketing, and sales, and health care administration.

Learn more about the BS in Pharmaceutical Sciences program at The University of Toledo.

Visit us online at *utoledo.edu/pharmacy*
or call 419.383.1904 to schedule a tour and meeting.