Medicinal & Biological Chemistry Major

Medicinal & 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.

Career Opportunities:
Professional chemists are in demand! Students graduating from this major will be ideal for a variety of careers, such as drug analysts, research chemists, technical writers, sales representatives, biochemistry technical officers, and forensic scientists, as well as other positions requiring a knowledge of chemistry. Employers include large and small pharmaceutical companies, biotechnology companies, hospital laboratories, government laboratories, and the chemical industry. Graduates are also able to move on to graduate programs in the field, medical school, or other professional schools.

Pharmacology/Toxicology Major

Pharmacology and toxicology are biomedical sciences which study how to develop safe, effective drugs and prevent the harmful effects of chemicals. Pharmacology focuses on the way drugs interact with various living systems, while toxicology focuses on the interaction of toxic compounds in the body.

Career Opportunities:
This major prepares students to work as a pharmacologist and toxicologist in the biomedical industry, the pharmaceutical industry, nutritional industries, environmental conservation and pollution control, scientific civil service, governmental agencies, forensic sciences, and research institutes. Graduates can also work as sales representatives or move on to graduate studies in the field, medicine, veterinary medicine, and in most biomedical fields.

Pharmacy Administration Major

Pharmacy administration focuses on the corporate and managerial aspects of the pharmacy profession. Students earn a minor in business administration or professional sales in addition to the BSPS degree. There are five options under this major: business administration minor option; professional sales minor option; business administration minor and professional sales minor option; business administration minor and MBA track option; and professional sales/business administration minors and MBA track option. With one year of additional graduate study, students in the two MBA track options can receive a master of business administration degree.

Career Opportunities:
Pharmaceutical sales is one of the fastest growing careers in the country. The pharmacy administration major prepares students for careers in pharmaceutical sales, and management positions in the pharmaceutical industry, corporate and retail pharmacy offices, pharmacy education, government agencies, and healthcare administration. Students are encouraged to pursue graduate studies in business or pharmacy administration.
Pharmaceutics Major

Pharmaceutics is a multidisciplinary applied science which studies 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 also on the understanding and control of the factors influencing clinical response to drug therapy.

The Bachelor of Science in Pharmaceutical Sciences (BSPS) degree is a four-year baccalaureate program in The University of Toledo’s College of Pharmacy, created in response to the increasing demand for scientists, researchers, administrators, and professional sales representatives in the pharmaceutical fields. Pharmaceutical sciences represent the collective basic sciences that underlie pharmacy. There are four majors under this degree program. They are medicinal & biological chemistry, pharmacology/toxicology, pharmaceutics, and pharmacy administration.

Practicum Opportunities

The mandatory practicum in all majors provides students opportunities to gain real world career experiences and start career networking before graduation. Some students even find jobs through the practicum. Currently we have over 100 practicum sites throughout the U.S., Puerto Rico, South Africa, Brazil and China. Examples of the sites have included: Pfizer, Wyeth, Procter & Gamble, Abbott, Microsoft, Will Research, Johnson & Johnson, Detroit Public Schools, Pharmaceutical Horizons, Total Therapeutic Management, Advocare, Sterling Labs, Buderer Drug, NSF, NAMSA, Eli Lilly, local community hospitals and major retail pharmacy chains.

Program Admission Requirements

Acceptance into the BSPS program will be based on the student’s cumulative GPA and science GPA obtained by the end of the fall semester of the second year. GPAs will be calculated as defined in The University of Toledo general catalog. A minimum cumulative GPA and science GPA of 2.7 for each will be required for application to the BSPS program. The number of students admitted will be determined by the Admissions Committee. The students, who meet the criteria, will be admitted as third-year students into the BSPS program for the following fall semester.

Career Opportunities:

The breadth and depth of the program prepare students for a wide range of career opportunities. Graduates can work as drug analysts, manufacturing/production technologists, quality control inspectors, technical writers, sales representatives, and research associates in the pharmaceutical industry, cosmetic industry, hospitals, and university settings. Graduates can also move on to graduate studies in the field, medical school, or other professional schools.

Did you know you could help develop everyday household and personal products with a BSPS degree?