

**Did you know** that you can consider applying to the professional doctor of pharmacy (PharmD) program *after* obtaining a degree in any major? Although a degree is not required, there are many benefits to obtaining a stronger academic background before entering the program. **Did you know** that you do not need to pursue a professional degree in pharmacy to work in the field of pharmaceutical sciences? The discovery and development of new drugs and therapies, research, and the improvement of the health of patients can be obtained through a number of multi-disciplinary fields. It takes a variety of skills to develop good medicines.

**Undergraduate Catalog:** [Biochemistry Overview](#)

### [Biochemistry](#)

[www.smbs.buffalo.edu/bch](http://www.smbs.buffalo.edu/bch)

140 Farber Hall, South Campus • 716.829.3005

Students seeking to examine the chemical basis of life while building a solid foundation in biochemical processes and research can focus on a Bachelor of Science degree in Biochemistry. Particularly, the degree is suitable for students with good laboratory and analytical ability. While a majority of graduates go on to pursue professional schools in dentistry and medicine or graduate school, a number of graduates find employment in such fields as consumer protection, food and drug analysis and technology, pharmaceuticals, sales, and many others. Please note: this major requires a more rigorous Math (MTH141/142) and Physics (PHY107/108/158) sequence. The department also offers MA and PhD graduate degrees. *\*selective admission*

**Undergraduate Catalog:** [Biological Sciences Overview](#)

### [Biological Sciences](#)

[www.biology.buffalo.edu](http://www.biology.buffalo.edu)

109 Cooke Hall, North Campus • 716.645.2363

Students completing a degree in the biological sciences find employment in such diverse fields as science writing, medical illustration, biologically oriented computer applications, teaching, sales, marketing, horticulture, and research technicians. The Bachelor of Arts degree allows students to do elective laboratory and lecture courses as well as provides a broad-based education in the biological sciences. The Bachelor of Science degree is designed to provide the opportunity for in-depth study within sub disciplines of the biological sciences, including cell and molecular biology, ecology and evolutionary biology, and pre-health studies. MS and PhD graduate degrees are also offered.

**Undergraduate Catalog:** [Biotechnology Overview](#)

### [Biotechnology](#)

[www.smbs.buffalo.edu/cls](http://www.smbs.buffalo.edu/cls)

26 Cary Hall, South Campus • 716.829.3630

Biotechnology is appropriate for students interested in scientific careers in a rapidly expanding biotechnology industry. Employment is extremely varied and available in both the public and private sectors, in industry research, regulatory affairs, management, sales, and education. It also is an excellent background for advanced graduate or professional degrees in the sciences. Interdisciplinary in approach, the program provides a core curriculum of basic science and mathematics courses, while students also choose technical electives from anthropology, pharmacology and toxicology, biology, chemistry, computer science, management, medicinal chemistry, medical technology, and other departments according to their career goals. *\*selective admission, application deadline*

**Undergraduate Catalog:** [Chemistry Overview](#)

### [Chemistry and Medicinal Chemistry](#)

[www.chemistry.buffalo.edu](http://www.chemistry.buffalo.edu)

363 Natural Sciences, North Campus • 716.645.6800, ext. 2035

Graduates with a bachelor's degree in chemistry often work as bench chemists in industry, hospitals, and government laboratories, or go on to attend graduate or professional schools in such areas as medicine, law or business. The chemistry department offers two degree programs where students can specialize in the areas of analytical, inorganic, medicinal, organic, and physical chemistry. The Bachelor of Arts program is designed for students who wish to pursue a very flexible course of study and the Bachelor of Science program is for those who desire a more complete training in chemistry and plan to continue professionally in the field after graduation in either graduate school or industry. Medicinal chemistry is an interdisciplinary area incorporating synthetic organic chemistry, biochemistry, pharmacology, molecular biology and pharmaceutical chemistry in the search for better drugs. Medicinal chemists have the opportunity to advance science and to also see their work directly contribute to alleviating many of the diseases afflicting humankind.

**Undergraduate Catalog:** [Medical Technology Overview](#)

### [Medical Technology](#)

[www.smbs.buffalo.edu/cls](http://www.smbs.buffalo.edu/cls)

24A Cary Hall, South Campus • 716.829.3630

Medical technology deals with the diagnosis and treatment of disease. It is a field of applied biology and chemistry and is appropriate for students interested in the delivery of health-care services. The Bachelor of Science degree in Medical Technology is interdisciplinary in nature, drawing heavily upon the resources of both the natural sciences and the health sciences. Career opportunities for medical technologists are extremely varied, and employment is available in both the public and private sector. A number of work settings include hospital or private laboratories, instrument manufacturers, research or industrial laboratory careers, and scientific writing or editing, to name a few. *\*selective admission, application deadline*

**Undergraduate Catalog:** [Nuclear Medicine Technology Overview](#)

### [Nuclear Medicine Technology](#)

<http://nucmed.buffalo.edu>

105 Parker Hall, South Campus • 716.829.5889

Most positions in the nuclear medicine technology field are in hospitals, physician's offices, and outpatient imaging centers. Nuclear medicine technologists can also branch into health physics or work for commercial companies in sales, research, or education. The Bachelor of Science degree is a health-related profession concerned with the use of radioactive materials for diagnostic, therapeutic and research purposes. Although it is a highly technical profession, the field also offers a lot of patient interaction. *\*selective admission, application deadline*

**Undergraduate Catalog:** [Pharmaceutical Sciences Overview](#)

**Pharmaceutical Sciences**  
<http://www.pharmacy.buffalo.edu/psci.shtml>  
112 Cooke Hall, North Campus • 716.645.2825

Graduates of the pharmaceutical sciences major are highly sought for employment in pharmaceutical research environments. Additionally, graduates may find opportunities in university, hospital, or pharmaceutical industry settings as research associates, drug analysts, manufacturing/production technologists, marketing/sales drug representatives or for preparation for graduate studies. The program offers a unique interdisciplinary field of study that seeks to achieve better understanding of the factors influencing clinical responses to drug therapy and includes coursework in biology, chemistry, biochemistry and mathematics.  
*\*selective admission, application deadline*

**Undergraduate Catalog:** [Pharmacology & Toxicology Overview](#)

**Pharmacology and Toxicology**  
[www.smbs.buffalo.edu/pmty](http://www.smbs.buffalo.edu/pmty)  
102 Farber Hall, South Campus • 716.829.2800

The Department of Pharmacology and Toxicology offers both a BS and a 5 year BS/MS program. These programs provide a strong preparation for graduate study in the Biomedical Sciences and professional schools such as Pharmacy, Medicine, Dentistry, Physician Assistant and Law. The broad academic background of a pharmacology and toxicology degree provides students with a wide array of career opportunities, including the pharmaceutical and chemical industry, government or university laboratories and technical or sales positions. Conceptually this program is based on fundamental sciences, including physics, chemistry, and mathematics and it borrows from developments in allied biomedical fields such as physiology, biochemistry, and molecular biology.  
*\*selective admission, application deadline*

**Undergraduate Catalog:** [Psychology Overview](#)

**Psychology**  
[www.psychology.buffalo.edu](http://www.psychology.buffalo.edu)  
283 Park Hall, North Campus • 716.645.3650, ext. 283

The department of psychology offers both a Bachelor of Arts and Bachelor of Science degree. The Bachelor of Science degree includes a strong science-oriented training component that emphasizes the scientific foundation of psychology along with a strong basic science background. Graduates of the program are prepared for science-based professions as well as advanced training in psychology, medicine, cognitive science, neuroscience, and other related disciplines.

**Other Alternative Scientific Disciplines for Students Strong in Sciences and Mathematics:** Biomedical Sciences, Engineering, Exercise Science, Nursing, Occupational Therapy, and Physics (refer to the [Undergraduate Catalog](#))

**Other Multi-Disciplinary Fields:** A degree in Anthropology, Business, Economics, Sociology, Social Sciences Interdisciplinary, a Special Major, and many other College of Arts and Sciences majors can provide a variety of skills that can be attractive to potential employers.

**Career Services**  
[www.ub-careers.buffalo.edu](http://www.ub-careers.buffalo.edu)  
259 Capen Hall, North Campus • 716.645.2231

If it is time to re-evaluate your interests and goals or if you need assistance with further understanding yourself, exploring options, or gaining guidance in the decision-making process, then UB's Office of Career Services is an excellent resource that provides several key services:

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| <input type="checkbox"/> Career Counseling                                     | <input type="checkbox"/> Meet-a-Mentor Program   |
| <input type="checkbox"/> Workshops/Seminars/Career Fairs                       | <input type="checkbox"/> UBE 202, a 3-credit course aimed at assisting students with self-assessment, decision-making strategies, examining career choices, and much, much more. |
| <input type="checkbox"/> Self-Assessment/Vocational Interest Inventories/FOCUS |  |
| <input type="checkbox"/> Career Library  |  |

**Enhance Your Employment Opportunities!** Regardless of the major you choose, remember that experiences outside of the classroom will help you develop marketable skills to increase your future employability anywhere:

Internships and volunteer work	<a href="http://www.ub-careers.buffalo.edu/student.php">www.ub-careers.buffalo.edu/student.php</a>
Part-time or summer employment	<a href="http://www.student-affairs.buffalo.edu/career/stufind.php">www.student-affairs.buffalo.edu/career/stufind.php</a>
Assisting a professor with research	<a href="http://curca.buffalo.edu">http://curca.buffalo.edu</a>
Participation in student clubs and other organizations	<a href="http://www.getinvolved.buffalo.edu">www.getinvolved.buffalo.edu</a>
Computer skills	<a href="http://www.itworkshops.buffalo.edu">www.itworkshops.buffalo.edu</a>
Writing skills	<a href="http://tlc.buffalo.edu/lcwrite.htm">http://tlc.buffalo.edu/lcwrite.htm</a>
Public speaking on and off campus	<a href="http://www.leadership.buffalo.edu">www.leadership.buffalo.edu</a>
Leadership development & Community involvement	<a href="http://www.leadership.buffalo.edu">www.leadership.buffalo.edu</a>

#### **Resources**

A Guide To Choosing A Major	<a href="http://advising.buffalo.edu/yourmajor/index.php">http://advising.buffalo.edu/yourmajor/index.php</a>
Career Services	<a href="http://www.ub-careers.buffalo.edu">www.ub-careers.buffalo.edu</a>
College of Arts and Sciences (CAS)	<a href="http://casadvising.buffalo.edu">http://casadvising.buffalo.edu</a>
Cora P. Maloney College	<a href="http://cpmc.buffalo.edu">http://cpmc.buffalo.edu</a>
Counseling Services	<a href="http://ub-counseling.buffalo.edu">http://ub-counseling.buffalo.edu</a>
School of Engineering & Applied Sciences	<a href="http://www.eng.buffalo.edu">www.eng.buffalo.edu</a>
The Occupational Outlook Handbook	<a href="http://www.bls.gov/oco">www.bls.gov/oco</a>
Undergraduate Catalog A to Z	<a href="http://undergrad-catalog.buffalo.edu/atoz/index.shtml">http://undergrad-catalog.buffalo.edu/atoz/index.shtml</a>
Undergraduate Advising	<a href="http://advising.buffalo.edu">http://advising.buffalo.edu</a>

#### **Science and Pharmaceutical Resources**

Biology Jobs	<a href="http://www.biologyjobs.com">www.biologyjobs.com</a>
Careers in Allied Health	<a href="http://www.ama-assn.org/ama/pub/category/10481.html">www.ama-assn.org/ama/pub/category/10481.html</a>
Pharmaceutica	<a href="http://www.aapspharmaceutica.com/careercenter">www.aapspharmaceutica.com/careercenter</a>
Science Careers	<a href="http://sciencecareers.sciencemag.org">http://sciencecareers.sciencemag.org</a>
SCIJOBS	<a href="http://www.scijobs.com">www.scijobs.com</a>

**HEALTH PREREQUISITES FOR UNDERGRADUATE MAJORS<sup>a</sup>**

This chart is for students who are interested in a health profession. Students who are preparing for a major listed below should seek advisement from the appropriate department.

	ANA	APY	BIO	CHE	CSE	MIC	MT	MTH	NMD	PGY	PHI	PHY	STA
<b>BIOCHEMISTRY</b>			200-201 and 205/215	101-102 and 201-202				141-142				107-108/158	
<b>BIOLOGY</b>			200-201 and 205/215	101-102 and 201-202				121-122 or 141-142				101/151 and 102/152 or 107-108/158	
<b>BIOMEDICAL SCIENCES</b>			200-201	101-102 and 201-202				121-122 or 141-142				101/151 and 102/152 or 107-108/158	
<b>BIOTECHNOLOGY</b>			200-201	101-102 and 201-202	101	301 <sup>c</sup>				300			119 or PSY 207
<b>CHEMISTRY</b>				101-102 or 105-106 or 107-108 and 201-202 or 251-252				141-142				107-108/158	
<b>MEDICAL TECHNOLOGY</b>	113 <sup>b</sup>	248 <sup>b</sup>	200-201	101-102 and 201-202	101	301	101 <sup>b</sup> 150 <sup>b</sup> 201 <sup>b</sup>			300	337 or 107 or 117		119 or PSY 207
<b>NUCLEAR MEDICINE TECHNOLOGY</b>	113 or NMD 113		200-201	101-102 201-202 <sup>b</sup>	101				210 <sup>b</sup>	300		101/151	119 or PSY 207
<b>PHARMACEUTICAL SCIENCES</b>			200-201	101-102 or 105-106 or 107-108 and 201-202 or 251-252				121-122 or 141-142				101-102 or 107-108	
<b>PHARMACOLOGY AND TOXICOLOGY</b>	113	107	200-201	101-102 and 201-202				121-122 or 141-142				101/151 and 102/152 or 107-108/158	
<b>PRE-PHARMACY</b>	113		200-201	101-102 or 105-106 and 201-202 or 251-252		301		121-122 or 141-142		300 or 451 and 452		101-102 or 107-108	119 or PSY 207
<b>PSYCHOLOGY (BS)</b>			200	101-102 or 103-104 or 105-106				121-122 or 141-142					PSY 207

<sup>a</sup> Visit the undergraduate catalog for current requirements and course descriptions at <http://undergrad-catalog.buffalo.edu>

<sup>b</sup> Courses that are recommended by the department but not required.

<sup>c</sup> Although MIC 301 is recommended prior to admission, on a space-available basis, students may be admitted without this course; the course must be taken by the end of the summer prior to the senior year.