



MEDICAL PROFESSIONS  
ADVISEMENT



EAST TENNESSEE STATE  
UNIVERSITY

# PRE-PHARMACY GUIDE



## EMPLOYMENT OPPORTUNITIES

# 314,300

jobs in 2018

## MEDIAN ANNUAL WAGE

# \$126,120

in 2018

for more information, see the Bureau of Labor Statistics <http://www.bls.gov/ooh/healthcare/pharmacists.htm>

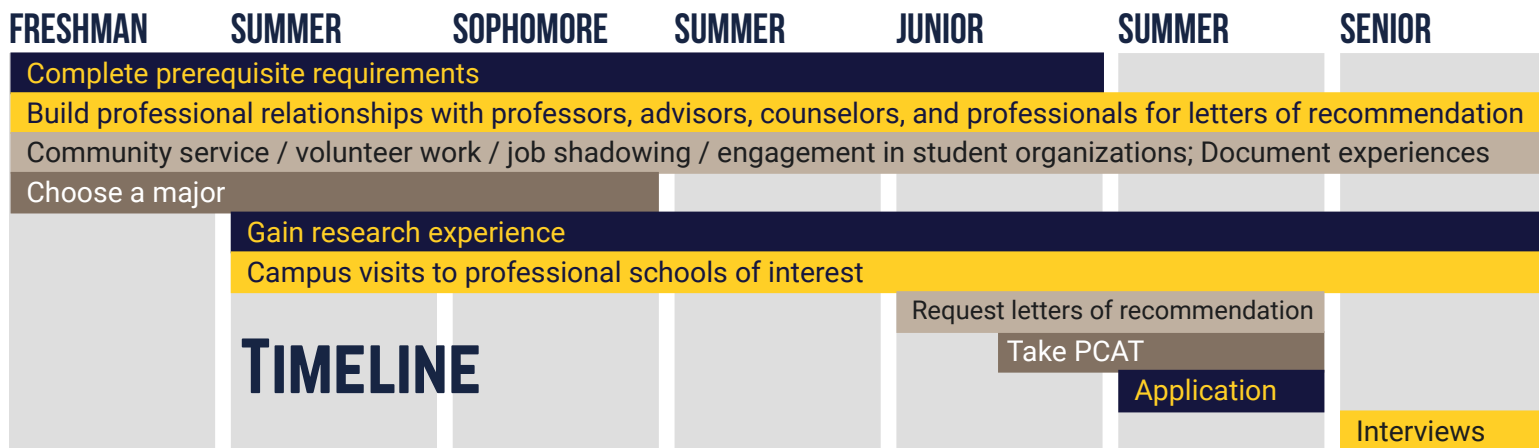
The Pre-Pharmacy track at East Tennessee State University prepares students for application to a three- or four-year Doctor of Pharmacy degree program. Students may apply to some pharmacy schools after the successful completion of two years of pre-requisite undergraduate coursework. At ETSU Bill Gatton College of Pharmacy students who are admitted without a bachelor's degree will have an opportunity to complete a four-year degree while progressing in the PharmD program.

## CAREERS IN PHARMACY

Pharmacists are medication experts. Therefore, you can find pharmacists working anywhere that medications are designed, studied, promoted, taught, and dispensed. While you may think of pharmacists practicing in community pharmacy settings, pharmacists also enter careers in hospitals, doctor's offices, pharmaceutical industry, federal entities (such as the Food and Drug Administration), insurance companies, compounding pharmacies, nuclear pharmacies, academia, and many other areas.

Pharmacists are routinely considered integral members of inter-professional health care teams and improve the lives of patients by managing and optimizing the medications they take. Demand is increasing for pharmacists in a variety of occupational settings including:

- academic pharmacy
- ambulatory care pharmacy
- consultant pharmacy
- federal pharmacy (military/public health setting)
- hospital and institutional pharmacy
- informatics
- managed care pharmacy
- pharmaceutical sciences



## TIMELINE

## ADVISEMENT

**PRE-PHARMACY IS NOT A MAJOR.** Therefore, you must choose a major (and minor, if appropriate) which supports your life goals by the time you earn 60 credit hours. Pharmacy schools are interested in students who have excelled in the sciences and mathematics, but you do not have to major in these disciplines. Choose a major/minor that you enjoy and that plays to your strengths.

It is strongly suggested you meet with your advisor and MPA counselor each semester. Students who receive scholarships or participate in specialized ETSU programs (such as athletics or Honors College programs) must also seek advisement from those departments. Serious consequences can occur if students fail to meet with appropriate advisors (e.g., failure to graduate on time, missing appropriate courses to prepare for the PCAT, etc.).



**MPA COUNSELOR CONTACT**  
 Medical Professions Advisement Office  
 423-439-5602

# WHAT DOES IT TAKE TO GET INTO PHARMACY SCHOOL?

## GPA - 3.30

2019 average for accepted students as reported by the American Association of Colleges of Pharmacy.

**PCAT no longer required for admission to ETSU's Bill Gatton College of Pharmacy**

## 57.4%

2019 average composite percentile score for accepted students as reported by the American Association of Colleges of Pharmacy

### CORE PREPARATION COURSES

Different schools may have varying prerequisite requirements. It is up to the student to research and ensure the required courses are completed before application to the preferred school(s) of interest.

General Biology	4 hours	BIOL 1110/1111
General Chemistry	8 hours	CHEM 1110/1111, CHEM 1120/1121
Organic Chemistry	8-10 hours	CHEM 2010/2011, CHEM 2020/2021
Biology Elective	3 hours	Biology II, Biochemistry, Human Anatomy, Human Physiology, etc
Physics	4 hours	PHYS 2010/2011
Microbiology	4 hours	HSCI 2230/31 or 3320/21
Communication	6 hours	ENGL 1010, Gen. Ed. Communications
Calculus	4 hours	MATH 1910
Probability and Statistics	3 hours	MATH 1530

If no baccalaureate degree has been earned by the end of the spring term prior to starting pharmacy school, then additional required courses:

Composition	3 hours	Any writing-intensive course in the English area is acceptable
Economics	3 hours	ECON 2210 or 2220
Oral Communication	3 hours	COMM 2025/2045/2055/2090
Social Sciences or Humanities	9 hours	
Elective	3 hours	Science recommended

### ADDITIONAL RECOMMENDED COURSES

Biochemistry	5 hours	BIOL 4147/4157 or 4167/4177 or HSCI 3030/31
Human Anatomy	4 hours	HSCI 3000
Human Physiology	4 hours	HSCI 3020
Calculus II	4 hours	MATH 1920
Immunology	3 hours	HSCI 3540

# WHAT CAN I BE DOING NOW TO STRENGTHEN MY APPLICATION TO PHARMACY SCHOOL?

**RELATED EXPERIENCE** Students are encouraged to explore the field of pharmacy by shadowing, employment, and volunteer work. Pharmacy schools want to know that a student has worked in the field, observed what is involved, and still has the desire to continue in that profession. Quality of exposure is more important than quantity.

**EXTRACURRICULARS** The admissions committees of pharmacy schools are interested in seeing a range of extracurricular activities, especially those demanding a significant leadership role. Students should demonstrate their ability to balance full academic schedules with extracurricular involvement on and off campus and/or through employment opportunities. ETSU has many organizations that students can join. Students should visit ETSU's Student Activities and Organizations office or webpage ([etsu.edu/students/sao/](http://etsu.edu/students/sao/)) for more information regarding extracurricular activities. It is not beneficial to simply join an organization; you must demonstrate leadership!

**VOLUNTEER EXPERIENCE** Pharmacy schools are looking for candidates who express a commitment to service. Students should seek volunteer projects that focus on giving back to their community.

**ONLINE ETIQUETTE** Please consider personal email addresses when corresponding with professional schools. First impressions are often based on correspondence; therefore email addresses should be appropriate for professional communication. Messages and images sent electronically are reflections of judgment and potential suitability for professional careers. Inappropriate behaviors shared on an accessible venue can be viewed and shared by anyone, possibly compromising your chances of admission to a professional school.

## SUGGESTED 2-YEAR SCHEDULE FOR PRE-PHARMACY STUDENTS

### FRESHMAN

#### Fall

CHEM 1110/11  
BIOL 1110/11  
MATH 1530  
ENGL 1010  
PREH 1350

#### Spring

CHEM 1120/21  
BIOL 1120/21  
ENGL 1020  
MATH 1530  
ELECTIVE

### SOPHOMORE

#### Fall

CHEM 2010/11  
HSCI 3320/3321  
SPCH ELECTIVE\*  
MAJOR ELECTIVE

#### Spring

CHEM 2020/21  
PHYS 2020/21  
ECON 2210 or 2220  
ELECTIVE  
MAJOR ELECTIVE

Students should maintain a minimum of 17-19 credit hours per semester

### WATCH WHAT YOU POST!



# STUDENT ORGANIZATIONS

## WE HAVE 15+ PRE-HEALTH STUDENT ORGANIZATIONS FROM THE 250+ AT ETSU

Alpha Epsilon Delta

Pre-Health Honor Society

Chronic Illness and Disease Awareness

EM/ERGE

ETSU RAM Chapter

Health Occupations Students of America  
Multicultural Association of Pre-Health

Pre-Pharmacy Student Organization

Timmy Global Health

Greek life, service organizations, and faith-based organizations also provide excellent opportunities for involvement and leadership.



Please visit Student Activities and Organizations to find an organization that best fits your goals.

[etsucampuslabs.com/engage/organizations](https://etsucampuslabs.com/engage/organizations)

## THE APPLICATION PROCESS

Most pharmacy schools participate in the Pharmacy College Application Service (PharmCAS) at <http://www.pharmacas.org>. An application will be completed through this service and will then be administered to the pharmacy school(s) of your choice. Most schools require a supplemental application that will be supplied by the school.

Applications are available in July; however, application deadlines vary from November through March for each school. It is important to be aware of the deadlines and submit your applications as early as possible. During the application process, most schools will require at least two letters of recommendation, one of which should be from a pharmacist. Therefore, it is important for you to establish a strong relationship with the person(s) you are shadowing.

## ETSU'S GATTON COLLEGE OF PHARMACY OFFERS SEVERAL UNIQUE OPTIONS FOR EARLY ADMISSION AND COMPLETION OF A BACHELOR'S DEGREE:

**EARLY ADMISSIONS PROGRAM** Gatton College of Pharmacy provides assurance of admission to the Pharm.D. program to high achieving high school students and freshmen choosing to attend ETSU. Competitive applicants will have an ACT score in the range of 25+ and a GPA in the range of 3.75+. Students must apply directly to GCOP for the Direct Admission program and must meet certain criteria to matriculate into the Pharm.D. program. <https://www.etsu.edu/etsu-news/2020/04-april/three-plus-one-program.php>

**B.S. DEGREE IN PHARMACY STUDIES** Competitive applicants may begin the Pharm.D. program as soon as they have completed at least 61 semester hours of specified undergraduate courses. After admission to GCOP, some students may elect to pursue a B.S. degree Pharmacy Studies alongside their Pharm.D. degree. Pharmacy Studies focuses on the basic sciences that underlie drugs and drug therapy and prepares students for careers in pharmacy, pharmaceutical science and research, pharmaceutical administration and sales, biotechnology, drug manufacturing, regulatory affairs, pharmaceuticals, pharmacology and toxicology, dosage formulation, manufacturing quality assurance, and regulations. <https://www.etsu.edu/etsu-news/2020/04-april/three-plus-one-program.php>

**3 + 1 PROGRAMS** GCOP also offers 3 + 1 programs in Biology, Chemistry, and Health Sciences, allowing students to complete their final year of coursework in these majors while beginning their Pharm.D. degree. Upon successful completion of the required first year pharmacy courses, the student will receive a BS in their chosen major. See the ETSU Catalog or meet with your MPA Counselor for more information. <https://www.etsu.edu/etsu-news/2020/04-april/three-plus-one-program.php>

American Association of Colleges of Pharmacy

<http://aacp.org>

Pharmacy College Application Service

<http://www.pharmacas.org>



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