



Pharmacists typically do the following:

- Fill prescriptions, verifying instructions from physicians on the proper amounts of medication to give to patients
 - Check whether the prescription will interact negatively with other drugs that a patient is taking or conditions the patient has
 - Instruct patients on how and when to take a prescribed medicine
 - Advise patients on potential side effects they may experience from taking the medicine
 - Advise patients about general health topics, such as diet, exercise, and managing stress, and on other issues, such as what equipment or supplies would be best for a health problem
 - Complete insurance forms and work with insurance companies to be sure that patients get the medicines they need
 - Oversee the work of pharmacy technicians and pharmacists in training (interns)
 - Keep records and do other administrative tasks
 - Teach other healthcare practitioners about proper medication therapies for patients
 - Some pharmacists who own their store or manage a chain pharmacy spend more time on business activities, such as inventory management.
- Pharmacists also take continuing education throughout their career to keep up with the latest advances in pharmacological science.

Other roles:

- Pharmacists who work in universities or for pharmaceutical manufacturers are involved in researching and testing new medications.
- With most drugs, pharmacists use standard dosages from pharmaceutical companies. However, some pharmacists create customized medications by mixing ingredients themselves, a process known as compounding.
- Although most pharmacists work in retail stores, some work in specialized fields. The following are examples of types of pharmacists who work in settings outside of retail: Clinical pharmacists work in hospitals and other healthcare settings. They spend little time dispensing prescriptions. Instead, they are involved in direct patient care. For example, they may go on rounds with a doctor and recommend medications to give to patients. They also counsel patients on how and when to take medications and monitor patients' health. Consultant pharmacists are also specialists that advise healthcare facilities or insurance providers on how to make pharmacy services more efficient. They also may give advice directly to patients, such as helping seniors manage their prescriptions. Finally, some pharmacists work full time or part time as college professors. (*Occupational Outlook Handbook*)

A minimum of 64 semester hours are required for admission at most pharmacy schools. However, many of the students entering pharmacy school have a baccalaureate degree. Therefore, students pursuing a pre-pharmacy curriculum are expected to choose a major so that they can be working towards a baccalaureate degree concurrently with the pre-pharmacy program. This requires a major/minor combination or a comprehensive major as well as completion of the UNK general studies requirements and other degree requirements as set forth in the college catalog. Pharmacy schools do not specify which major a student should pursue in conjunction with his/her pre-pharmacy studies. **Gaining acceptance into a pharmacy school is a very competitive process. Completion of the pre-requisite courses does not automatically guarantee admission.**

The following requirements are based on the admission requirements of the College of Pharmacy at the University of Nebraska Medical Center. A student applying to a School of Pharmacy other than that at the University of Nebraska Medical Center (UNMC) should check with the school to ensure that other requirements are fulfilled. Required courses are as follows:

1. Biological Sciences

Take one of the following:

BIOL 103	General Biology	4
BIOL 105	Biology I	4
BIOL 106	Biology II	4

Take all of the following:

BIOL 225	Anatomy and Physiology	4
BIOL 226	Anatomy and Physiology	4

2. Chemical Sciences and Physical Sciences

Take all of the following:

CHEM 160	General Chemistry	4
CHEM 161	General Chemistry	4
CHEM 360	Organic Chemistry	5
CHEM 361	Organic Chemistry	5
CHEM 351	Biochemistry	4
PHYS 205	General Physics	5

Take one of the following:

CHEM 301	Techniques of Chemical Analysis	4
PHYS 206	General Physics	5

3. Oral and Written Communication

ENG 101	Introduction to Academic Writing	3
ENG 102	Academic Writing and Research	3
SPCH 100	Fundamentals of Speech Communication	3

4. Analytical Science

Take the following:

MATH 115	Calculus I	5	*May be required to first take
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And take one of the following:

STAT 241	Elementary Statistics	3	MATH 102/103 if insufficient
PSY 250	Behavioral Statistics	3	preparation.
BIOL 305	Biostatistics	3	

5. General Education – Minimum 9 hours required with at least 6 hours coming from the following areas. The remainder of hours can include non-required courses in the areas listed above.

Gerontology, Sociology, Humanities, History, Ethics, Logic, Critical Thinking, Philosophy, Fine Arts, Literature, Business Administration, Management, Foreign Languages, and Political Sciences.

**ECON 271: Microeconomics is required by Creighton University.

Academic Guidelines

An overall GPA of 3.5 or above (on a 4.0 scale) is preferred and will result in the students being a more competitive applicant to pharmacy school. Each required course must be passed with a grade of "C" or better. A grade of "C-" will not be accepted. Students searching for electives outside their major requirements should consider courses from the following areas: biology, chemistry, mathematics, sociology, psychology, business administration, healthcare management, and healthcare economics. See your advisor for suggestions. Students should be aware of prerequisites on all courses and plan their coursework accordingly.

Non-Academic Guidelines

There is no magic formula for acceptance in to professional school. Admission is based on GPA, test scores, shadowing and medical experiences, community involvement and volunteerism, leadership qualities, the interview, the essay, and letters of recommendation. Shadowing and medical experiences are of utmost importance. Students should plan to shadow a minimum of 40 hours in their selected profession. Shadowing should include experiences in multiple settings such as hospital pharmacies, independently-owned pharmacies, and large retail pharmacies. Health Sciences offers opportunities to meet these non-academic guidelines through the Shadowing Program, the Health Science Club, and volunteer experiences. Research experience is not required, but will be looked upon favorably. Students should plan to be involved in these types of activities and experiences throughout their undergraduate career. Other important non-academic factors include good moral character, excellent interpersonal skills, a deep commitment to healthcare, evidence of leadership potential and service to others.

The Application Process

Students will make application to most pharmacy schools through a centralized application service called the Pharmacy College Application Service (PharmCAS). The centralized application service allows students to fill out one application to apply to multiple schools. The application and additional information may be access at www.pharmcas.org. Students should make application in the summer or early fall of the calendar year proceeding the year in which they hope to enroll in professional school. The application becomes open for students in early summer and the deadline for the UNMC College of Pharmacy is December 1st for both the PharmCAS application and supplemental application materials. UNMC uses a “rolling admission” process where application review begins in early September. Acceptances will begin to be offered in December and will continue until the class is full. Therefore, early application is strongly encouraged and early applicants are given preference. Applicants need not wait for PCAT scores, transcripts, or other application materials before applying through PharmCAS. Check with schools to which you are applying to verify their policies and procedures regarding supplemental applications.

Entrance Examination Requirement (PCAT)

Many U.S. pharmacy schools require applicants to take the Pharmacy College Admissions Test (PCAT). It is preferred that the PCAT is taken no later than August of the calendar year preceding the year in which the applicant wishes to enroll in a pharmacy program. Students register online at pcatweb.info. Scores are reported as percentile ranks. Many pharmacy schools report the composite percentile ranking for students accepted to pharmacy school to be 65% or above. To aid in PCAT preparation, Health Sciences offers a Test Prep Review Program every spring semester. For more information, please contact Health Sciences.

Letters of Evaluation/Recommendation

Letters of evaluation will be required of applicants. Letters from a faculty member, pharmacist or other health care provider, academic advisor, or employer would be appropriate. Information about the non-academic character of a student would be most useful as academic information is already in the application. Students should have their evaluation letters submitted directly through PharmCAS.

Interviews

Most schools screen applicants with some form of personal interview. The format of the interview may vary depending on the schools to which you are applying.

Criminal Background Checks

Prerequisite for enrollment into any health science professional program is consent for an external background check. This check includes, but is not limited to, past criminal offenses and registry information. If there is evidence of arrest for a crime(s), conviction for a crime(s), presence on an abuse registry, or other information which reasonably suggests that patient safety might be compromised, the student will be asked to provide additional information

Citizenship/International Students

Professional schools in the health sciences vary as to whether they accept non-U.S. citizens. Some schools that do accept non-citizens require a substantial financial commitment up front. Since not all schools accept non-citizens and since the financial commitment of those that do may be substantial, students should thoroughly research and carefully consider such a decision and discuss it with their pre-health advisors early in their undergraduate years.

Websites

American Association of Colleges of Pharmacy
UNK Health Sciences

www.aacp.org
www.unk.edu/healthsciences

Suggested Sequence of Key Courses

2 Year Plan

	Fall	Spring
Year 1	CHEM 160 MATH 115 (or start in lower level if needed) ENG 101 Portal 188GS (LOPER1) 15 hours	CHEM 161 BIOL 106 STAT 241 or other stats course from major ENG 102 SPCH 100 (LOPER3) 17 hours
Year 2	CHEM 360 BIOL 225 PHYS 205 LOPER7 or other 17 hours	CHEM 361 BIOL 226 CHEM 351 PHYS 206 or CHEM 301 17-18 hours

* Approximately 66 total hours. Students will not be able to get a degree from UNK because they will be short total hours and general studies courses.

3 Year Plan

	Fall	Spring
Year 1	CHEM 160 MATH 115 (or start in lower level if needed) ENG 101 (LOPER2) Portal 188 (LOPER1) 15 hours	CHEM 161 BIOL 106 STAT 241 or other stats course from major ENG 102 (LOPER2) SPCH 100 (LOPER3) 17 hours
Year 2	CHEM 360 BIOL 225 ECON 271 or LOPER7 LOPER6 15 hours	CHEM 361 BIOL 226 LOPER7 LOPER9 15 hours
Year 3	PHYS 205 CHEM 351 LOPER10 Course for Major/Backup? 15 hours	PHYS 206 or CHEM 301 LOPER5 LOPER11 Course for Major/Back up? 15 hours

* Approximately 92 hours total. **Students who are accepted into pharmacy school prior to completing a baccalaureate degree at UNK may be eligible to receive a Bachelor of Science degree in Applied Health Sciences if they have completed all general studies requirements and other graduation requirements as set forth in the UNK catalog and have at least 85 semester hours completed in pre-pharmacy studies. This 3-year plan will meet those requirements.**

- A minimum of 4 hours of general biology is required. Depending on a student's major, BIOL 103, BIOL 105, or BIOL 106 would be appropriate first year biology courses. However, courses in cell biology, microbiology, genetics and immunology are beneficial and preferred. Students should check with other pharmacy schools to which they intend to apply regarding biology requirements. Many schools require a course in microbiology and some require both microbiology and general biology.
- A MATH ACT score of 22 or prior completion of College Algebra (MATH 102) or higher is a pre-requisite for CHEM 160.
- It is not recommended to take any of the above science courses during a summer session, especially if the material will be covered on the PCAT.
- *Physics is not covered on PCAT. Therefore it can be taken at any time during a student's program, providing the math prerequisite (MATH 102: College Algebra-Grade of B+ or higher) has been met.