

Quick Facts: Pharmacy (PharmD)

<p>Is this career right for you?</p>	<ul style="list-style-type: none"> • Do you pay close attention to detail? • Are you a good listener? • Would you enjoy educating patients and serving as an expert consultant to Pharmacists? • Are you patient? • Are you good at delivering detailed instructions? • Do you enjoy and understand the importance of chemistry and how it is practically applied?
<p>Degrees</p>	<p>PharmD</p> <p>Note: If your focus is on research rather than clinical pharmacy, you may want to consider a PhD program in pharmaceutical science instead of a PharmD program.</p>
<p>Career Options</p>	<p>The AACP's Pharmacy Is Right For Me (http://pharmacyforme.org/) website offers an excellent source of advice on the range of career options in pharmacy, which include:</p> <ul style="list-style-type: none"> • Community Practice: <ul style="list-style-type: none"> ○ Retail chain, independent community pharmacy, community health center, veterinary pharmacy, etc. • Hospital Pharmacy • Pharmaceutical Research & Development • Academia • Medical Communications
<p>Length of Professional Training</p>	<p>It takes most people three to four years to complete the pre-pharmacy prerequisite coursework. Many pharmacy schools require only 90 hours of undergraduate coursework; they do not require an undergraduate degree. However, many people choose to earn a bachelor's degree in the process. Pharmacy school takes an additional four years, for a total of 7 to 8 years of higher education.</p>
<p>Prerequisite Comparison Guides</p>	<ul style="list-style-type: none"> • The American Association of Colleges of Pharmacy maintains an up-to-date chart of the prerequisites of their member pharmacy schools on their Compare PharmD Programs webpage: https://www.pharmcas.org/school-directory/explore-and-compare • Each school's prerequisites are also listed by school (with more detail) on the <i>PharmCAS School Directory</i>: https://www.pharmcas.org/school-directory/#/pharmd/general-information

<p>Pre-Pharmacy Clinical Experience</p>	<ul style="list-style-type: none"> • Shadowing is defined as the observation of a health care provider while that person cares for patients. We recommend spending ½ to 1 day <i>each</i> with the following types of clinicians: <ul style="list-style-type: none"> ○ A retail pharmacist ○ A hospital pharmacist ○ Another pharmacist in any setting ○ One other clinician in a related field (such as medicine, optometry, dentistry, etc.) • Direct patient interaction is defined as being in a position to offer comfort and moral support to conscious patients in a health care environment. Most successful applicants have spent <i>at least one year volunteering or working for 4 hours/week</i> (often more) in a direct patient interaction role in a clinical setting. Good options include: <ul style="list-style-type: none"> ○ A work-study position in Wardenburg’s Apothecary ○ A volunteer position in Avista’s pharmacy (this is a teaching pharmacy) ○ A paid or volunteer pharmacy technician position in a local retail pharmacy (some students have studied on their own for the Pharmacy Technician Certification Exam (PTCE), which opens doors to pharmacy technician jobs) ○ Any clinical volunteer position in a hospital or medical clinic that allows you to interact directly with conscious patients. <p>Your objectives are to become comfortable around sick and injured patients, to gain greater understanding of the health care system, and to develop your communication skills in a clinical setting.</p>
<p>Other Desired Traits and Experiences</p>	<p>Refer to the List of Core Competencies for Pre-Health Students, taking note that pharmacy schools especially emphasize the following:</p> <ul style="list-style-type: none"> • Service Orientation: Pharmacists typically have strong altruistic motivations. Most successful applicants have consistently engaged in paid and volunteer positions involving non-clinical service to others since high school. Examples include retail/restaurant jobs, working as a tutor, and volunteering in roles that allows you to directly help others who are in need. Greater consideration is given to long-term efforts that exemplify the applicant’s dedication and depth of commitment to the service chosen. • Cultural Sensitivity: Every pharmacist cares for patients from a wide variety of racial, ethnic, cultural, and socioeconomic backgrounds. Thus, a history of experiences with people of diverse backgrounds is valued. Such experiences may include living abroad for a period of time, involvement with multicultural organizations, or other volunteer or paid positions that have allowed you to understand and appreciate people whose backgrounds and belief systems are quite different from your own. • Effective Teamwork and Leadership: Pharmacists serve as leaders within their clinics and must tactfully influence the attitudes, beliefs, and behaviors of their patients. For this reason, PharmD programs value a history of serving as a leader of a team of people in an organized environment (such as serving as a teaching assistant, a resident assistant in a dormitory, a wilderness guide, a manager at work, the captain of an athletic team, or an officer in the military). Likewise, pharmacists often work in close collaboration with other clinicians; thus, PharmD programs look for a past history of collaborating successfully with others on a team in a professional setting (such as in research, business, etc.). • Scientific Inquiry: Your future work as a pharmacist will require you to use strong critical thinking skills on the job and to remain committed to lifelong learning. Getting involved in an independent study project or another form of research is a great way to demonstrate that you enjoy asking new questions and to gain formal practice in critically analyzing your results and presenting your findings. Although research experience is not an absolute requirement, it is valued for these reasons. Research is defined as involvement in a scholarly or scientific hypothesis investigation that is supervised by an individual with verifiable research credentials.

GPA	<ul style="list-style-type: none"> • Mean <i>cumulative</i> GPA of accepted students nationwide: 3.4 • Mean <i>science</i>* GPA of accepted students nationwide: 3.2 <p>Although it is ideal to apply with mean cumulative and science GPAs at or above the means for accepted students at your schools of interest, you can become a strong candidate with lower GPAs <i>if your recent academic history demonstrates a long-term trend of academic success.</i></p> <p>If your cumulative and/or science GPAs are currently below the means for accepted students, you can still become a competitive applicant if <i>each</i> of your term GPAs <i>for the four consecutive terms leading up to the time of application</i> are at or above the values listed above. If you have already completed the prerequisites, consider taking completing additional semesters with upper-division science elective courses or completing a one-year pre-health master's program before applying to pharmacy programs.</p> <p><i>*Science GPA is defined as your average GPA in all biology, chemistry, and physics courses. (CU Boulder prefixes of EBIO, IPHY, MCDB, NRSC, CHEM, and PHYS.) Writing and Statistics courses taken in these departments do not count toward your science GPA.</i></p>
Admissions Test	<p>The PCAT (Pharmacy College Admissions Test) is being phased out. It is no longer required by any pharmacy schools in the United States.</p>
Reference Guide for School Selection	<p>PharmCAS School Directory: http://www.pharmcas.org/school-directory/#/pharmd/general-information</p> <p>The PharmCAS <i>Compare PharmD Programs</i> webpage provides many handy lists: https://www.pharmcas.org/school-directory/explore-and-compare</p>
Number of Schools to Which to Apply	<p>We recommend applying to 4 to 6 carefully-selected schools.</p>
Application Fee Assistance	<p>A limited number of PharmCAS application fee waivers are available to financially disadvantaged applicants and are granted on a first-come, first-served basis, so you should apply early in the application cycle if you think you may qualify. Note: Your fee waiver request must be received and processed <i>before</i> you submit your PharmCAS application. If the fee waiver is granted, you <i>must</i> submit your PharmCAS application within 45 days.</p> <p>If you receive a fee waiver, you may apply to one program through PharmCAS for free. If you choose to apply to more than one program, you will pay the regular fee for each additional designation. You also will be responsible for paying each school's supplementary application fee.</p>

Recommended Application Timing

Pharmacy schools conduct their admissions processes on a rolling basis, which means that early applicants have a greater chance of acceptance than those who apply close to the application deadline. The PharmCAS application is released in mid-July each year, for the following year’s entering class. You will be an early applicant if you submit your PharmCAS application within the first two months of the application season and follow the timeline below:

Strongly recommended pharmacy school application timeline:

Study for PCAT	After completing all relevant courses (see above), ~300 hours (typically 15-20 h/week for 15-20 weeks) on PCAT prep
Take PCAT	<ul style="list-style-type: none"> By September 15
Start Common App, Submit Transcripts	<ul style="list-style-type: none"> By August 15
Submit Common Application	<ul style="list-style-type: none"> By September 15
Submit Supplemental Applications	<ul style="list-style-type: none"> Some pharmacy schools ask you to complete supplemental application information (essays, etc.) within PharmCAS. We recommend initially submitting your PharmCAS application with <i>just one school designation of this type</i> by the date listed above, so that PharmCAS can initiate your transcript verification process. Meanwhile, you can take an additional 2-3 weeks to add your remaining schools, complete their supplemental materials, and re-submit. By then, your transcript verification should be complete, so your additional schools will immediately receive your verified application. Other schools will only prompt you to complete a supplemental application after they have reviewed the rest of your application. For these schools, complete the supplemental application within two weeks of being prompted to do so.
Letters of Recommendation	<ul style="list-style-type: none"> Submitted on your behalf by October 15

Letters of Recommendation

Each pharmacy program sets its own guidelines regarding letters of evaluation; refer to the PharmCAS School Directory or each program’s website for details. **Please provide each of your evaluators with a copy of our Pre-Health Guidelines to Recommenders form.**

As a general guideline, the following assortment meets most schools’ requirements:

- One from a CU Boulder faculty member, ideally one who has taught you in a science lecture or seminar course and thus can comment upon your intellectual engagement as a student.
- One from a supervisor from a work or volunteer experience who can attest to your intrapersonal and interpersonal skills.
- One from another faculty member or supervisor who can speak to your strengths. For instance:
 - If you have been working in a pharmacy, you may want to ask a clinical supervisor to speak to your knowledge of and commitment to the profession, as well as your communication style with patients and colleagues.
 - If you have been strongly involved in research, you may want to ask your P.I. to write a letter that attests to your intellectual curiosity and problem-solving skills.
 - If you have a non-science major or minor, you may want to ask a faculty member from that department to write a letter that attests to your intellectual engagement as a student.