Pharmacy

(Pharm.D.)

Pharmacy is an attractive specialty in the Health sciences. Contemporary Pharmacy is incredibly dversified, with Pharm.D.s working in a variety of environments (industry, private practice, retail, hospitals, etc…) and the quality of life is often considered to be more flexible and family-friendly than others professions in the Health sciences; part-time and contract Pharmacists are common.

Unlike many other areas in Healthcare, education in Pharmacy has undergone a dramatic shift in structure in in the past 15 years. Prior, undergraduate students often fulfilled basic science and humanities requirements in 2 or 3 years and entered various degree-awarding programs leading to the credential associated with “Pharmacist”. Now, the majority of programs require a B.A. or B.S. (typically acquired in 4 years); program now nearly uniformly award a Pharm.D. as the terminal degree. This schedule, along with pre-requisites, more closely aligns with those of other Healthcare-related degrees (e.g. M.D., D.O.) than ever before.

In the U.S., there are 134 schools of Pharmacy; with 4 in Georgia (including 2 having only recently opened their doors). There are approximately 17,000 applications for about 14,000 seats, for a comparatively high about 80% annual acceptance rate. The Pharm.D. is a degree with a significant clinical component; it is a *clinical* degree. In addition to about 14,000 new Pharmacy students each year, there are about 6,000 new Ph.D. students in Pharmacology; a *research*-focused degree.

Pharmacists form perhaps the largest discrepancy between supply (new Pharm.D.s) and demand (meaningful work placement upon graduation) in healthcare going forward. In other words, the career outlook for Pharmacists is excellent. In 2015, full-time pharmacists made between $90,000 and $140,000 a year, with the average annual salary coming in between $112,000 and $119,000, depending on the data source.

In 2013, graduates entering the workforce reported a median loan debt of $152,000 for private programs and $114,000 for public. Luckily for pharmacists, if they enter the private sector, they will likely make a salary that allows them to responsibly pay that large amount back.

**Doctor of Pharmacy (Pharm.D.):** Domestically there are 134 schools internationally awarding the Pharm.D. credential.

**Pharmacy costs**: Cost for attending Pharmacy school range widely. The latest information for Georgia’s programs for in-state students cite a total costs ranging from $20,000 per year (UGA) to South Georgia at $50,000 per year. Like any post-graduate professional program, loans and scholarships are readily available, greatly reducing the stress associated with the necessity of “making ends meet” over the course of the 4-year program.

**Pharmacy Programs in Georgia**:

PharmD.- University of Georgia School of Veterinary Medicine (Public; Athens); Mercer University College of Pharmacy (Private; Macon & Atlanta); Philadelphia College of Osteopathic Medicine School of Pharmacy (Private; Suwanee); South University School of Pharmacy (Private; Savannah)

**Admissions**: Applicants are most likely to be admitted to Pharmacy school in their state of residence.

Acceptance rates for Pharmacy programs can be as high as 80%. Successful admission to a Pharmacy program requires demonstrated ability and experience in multiple areas. Excellence in one (e.g. grades), but the omission of another (e.g. experience) will almost certainly result in disappointment; *all* are important.

1. **Grades (and major)**: As is the case with many other healthcare professional schools, a solid G.P.A. is important, but not as vital as most believe. Admissions counselors often use the word “holistic” in how they approach the evaluation of candidates. Recent admissions number indicate that applicants averaged a GPA of 3.0 (PCOM-GA) to 3.44 (UGA) for those accepted and enrolled. Naturally, acceptance rates for students with lower G.P.A.s (less than 3.0) are low; but they are not negligible. In short, strong grades are important (3.4+ GPA); stellar grades (3.8+ GPA) will not make up for deficiencies seen elsewhere in the application.

As with other healthcare professional programs, schools are looking for intelligent, motivated and compassionate students. They are looking for students with the basic background knowledge (i.e. “pre-requisites”) and are expecting to “teach the rest”. That is, the selection is major is not as important as most would assume. So long as a student has the pre-requisite courses (regardless of whether they are part of their major or not), dental programs are satisfied. In other words, a “Pre-Pharm” major is *not* required (and is a determent in some circles) and there are stories of History, Chemistry, Business majors being accepted to Pharmacy schools. They merely took the additional coursework and performed the other requirements to successfully apply to a program.

**Your major at Oglethorpe**: Traditionally, students accepted to Pharmacy school have majored in Biology, BioPsychology or Chemistry. This is largely out of convenience-- the pre-requisites for most Pharmacy programs are largely covered by these majors. However, OU has had students with other majors have successfully applied.

1. **Pre-requisites/Coursework**: Academic preparation requires successful completion of several items. First and foremost is a bachelor’s degree. Pharmacy school is a post-graduate (i.e. post- B.A. or B.S.) education; though unlike many other post-graduate professional schools, Pharmacy schools still admit students without a degree, but with a large list of pre-requisite courses.

The choice of major is not very important (see A), above). The UGA program requires the following:

General (Inorganic) Chemistry- 2 semesters/1 year

Biology- 2 semesters/1 year the introductory level

Physics- 1 semester/½ year at the introductory level (i.e. non-Calculus)

Calculus

BioChemistry

English- 1 year (e.g. Core 101/102)

Other humanities coursework

Programs vary widely on the particulars of admissions requirements. Whenever you are identifying a program to apply to, it is strongly suggested that you review and prepare for any and all specific program requirements.

The reality is that the more coursework preparation, the better. It is often suggested that courses in Organic Chemistry, Biochemistry, Physiology, Cell Biology, Molecular Biology, and/or Genetics are a useful addition to the list of suggested courses.

In addition, many programs have specific and specialized pre-requisites, such as Calculus I or advanced Statistics.

<https://www.aacp.org/resource/pharmacy-college-admission-test>

1. **Standardized Testing**: Veterinary programs usually require the Graduate Record Exam (G.R.E.) with the Analytical Writing portion.

Sitting for the G.R.E. does not necessary require preparation. However the taking of a short course, such as Kaplan and Princeton Review, that provide reviews of test-taking strategies and banks of practice tests is strongly urged.

1. **Experience: Internship, Shadowing and/or Work**: A critical portion of the admissions process is the interview, often done on campus as part of an orientation and recruitment process. Interview conversations often center of the nature of Veterinary as a business and avocation. It is universally agreed that these critical conversations require a foundation in experience in the work environment of the professional. A brief shadowing experience, a longer volunteer internship (for academic credit or not) or a longer-term paid staff position are ways for future Veterinarians to gain invaluable experience in the working environment of modern animal care. In addition, it serves a goal of giving the future Veterinary student a taste for the work environment they will experience through their professional career.

Historically, students have worked (for pay) in local clinics or at home. This work often includes working in the pets being boarded or groomed. All these experience, whether for pay or not, are crucial steps in the development of a successful application.

1. **Letters of Reference (LORs)**: Internships, shadowing and/or work experience also provides the opportunity for a Healthcare practitioner to provide extensive and substantive comments of your professional initiative, demeanor and abilities in the form a “letter of reference” required for Veterinary school applications. The more in-depth their experience with you, the more in-depth and supportive of your desire to enter medical school will be their letter.

Typically, programs solicit up to 5 letters of reference that can include course instructors (such as professors), Veterinary professionals familiar with your interests and promise, work supervisors and character witnesses.

With respect to the former (Professors), students often ask Oglethorpe Professors for letters. Unlike larger Universities that formulate a consensus “Pre-Health Committee” letter, Oglethorpe University instructors write individual letters tailored for each applicant. The small class sizes and close and extensive interactions between instructors and students means letters can be honest, extensive and rich in detail and anecdotes- exactly what Veterinary school admissions committees are looking for. Students are encourage to cultivate a positive and productive relationship with each of their instructors in anticipation of asking for an honest (and confidential) evaluation of their academic abilities and promise for success in the Veterinary sciences.

1. **AADSAS (http://www.adea.org/GoDental/Future\_Dentists/ADEA\_AADSAS)**: The ADEA Associated American Dental Schools Application Service (ADEA AADSAS) is the centralized application service for most U.S. dental schools. ADEA AADSAS simplifies the applicationprocess by allowing applicants to complete one standardized application rather than fill out multiple applications. The service opens for the generation of applicant accounts and for the acceptance of data on July 1st of every application cycle. The site calculates applicant GPAs in a standardized format, organizes the acceptance and distribution of Letters of Recommendation (LORs), and the distribution of materials to programs.

**For Further Reading:**

The BEST place to start—“Explore Health Careers”: <https://explorehealthcareers.org/>

“Dental Admissions Test”: <http://www.ada.org/dat.aspx>

“Assoicated American Dental Schools Application Service: AADSAS”: <http://www.adea.org/GoDental/The_application_to_dental_school__ADEA_AADSAS.aspx>

“ADEA Go Dental”: <http://www.adea.org/GoDental/>