

Guiding the Health Professions Student:

A Reference for Counselors

2019 Resource Booklet

Courtesy of:

**Whitaker Health Professions Advising Office
California State University, Long Beach**

Guiding the Health Professions Student: 2019 RESOURCE BOOKLET

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PRE-HEALTH ADVISING

Resources for Advising Pre-Health Care Students

Congratulations – you’re the new pre-health advisor! Now what?

Ruth O. Bingham and Beverley Childress

There is no degree for this job, no prescribed training, not even a “how-to” manual. People come to pre-health advising from many paths – instructional faculty, professional academic advisors, health practitioners, administrators, graduate assistants, or staff hired specifically for the job. Most pre-health advisors learn on-the-job from fellow advisors, building their expertise based on the experiences and perspectives they bring with them. Welcome!

There are as many different ways to do this job as there are people doing it. Some pre-health advisors are instructional faculty in the natural sciences, offering guidance to students who choose to come in for advice. Others are professional advisors who work in a large department that includes full-time advisors, clerical staff, and student assistants; they offer comprehensive pre-health advising, present workshops, conduct mandatory advising sessions, provide committee letters, track students, and compile statistics. New pre-health advisors need to understand how pre-health advising fits into the institution, the models and options available, and the basic components in building a program that will suit the institution, its population and resources.

The following is a brief overview designed to make learning the new job easier.

STEP 1: FINDING YOUR BEARINGS

Pre-health advising can be located almost anywhere within an institution: in a specific college or department, in a campus-wide office, in an academic unit or in a student affairs office. It can also be an independent advising program or integrated into the institution’s advising system.

Wherever pre-health advising is housed, its location will impact its mission, values, and goals; funding; structure and administration of the program; what the pre-health advisor(s) can and cannot do about problems that affect students; and, most importantly, which students receive pre-health advising and whether some pre-health students slip through the cracks and receive none.

Diagramming the location of pre-health advising within the institution can help answer the following questions: How does pre-health advising fit into the institution? Does the institution use a centralized, decentralized, or shared system for pre-health advising? Do the pre-health advisors serve all pre-health students, or a specific college or population? What is the hierarchy for resolving problems? How is pre-health advising funded, and who controls the budget? Is pre-health advising located where it can do the most good for students?

Advisors often have to work with whatever structure and model they inherit; however, if the location or structure of pre-health advising is negatively impacting students and their success, advisors *can* facilitate change by working with their supervisors and other administrators.

STEP 2: THE HEALTH PROFESSIONS

There are literally hundreds of health fields. Students will ask about everything under the sun, including familiar fields, such as physician, nurse, or pharmacist, but also alternative medicine and fields such as radiologic technician, nurse anesthetist, medical educator, health administrator, nurse's aide, or dental hygienist. It is easy to become overwhelmed: how can anyone possibly learn about all of them?

The short answer is that advisors cannot know everything but can learn how to find answers by using reference books, online resources, and colleagues' expertise. In fact, knowing how to find answers is more useful than knowing the answers for two reasons: first, part of advising is teaching students how to find answers for themselves; second, the field of pre-health advising changes rapidly, so it is crucial to check current sources frequently for new information.

Pre-health advisors may find it helpful to learn about health fields in terms of the following basic categories. Each field will differ in details, but fields within a category will share similar educational paths, degrees of competitiveness, amounts of direct patient care, and levels of science/mathematics required. These categories do not represent a hierarchy, and it is imperative that they not be presented to students as such. It is also important to remember that there are significant exceptions in each category.

Diagnosing/Treating fields entail direct patient care from exceptionally well-educated practitioners. These fields are usually highly selective/competitive, require significant levels of science/mathematics, require or prefer a completed bachelor's degree, and require a post-baccalaureate degree.

- Examples: dentists, optometrists, physicians, podiatrists, and veterinarians.

Allied/Associated fields either are allied with or carry out prescribed treatments from diagnosing/treating professionals. These fields require well-educated practitioners and entail direct patient care, usually more hands-on work than in diagnosing/treating fields, and consequently require strong interpersonal skills. These fields are moderately to highly selective/competitive, require moderate to high levels of science/mathematics, and usually begin at the undergraduate level, but can extend to the doctoral level.

- Examples: nurses, dieticians, pharmacists, genetic counselors.

Rehabilitating fields also entail direct, hands-on patient care from well-educated practitioners. They are usually moderately selective/competitive, but can be highly selective/competitive if the number of applicants far exceeds the number of available seats. Some require a completed bachelor's degree; others begin at the undergraduate level. Most require moderate levels of science/mathematics and strong interpersonal skills.

- Examples: audiologists, occupational therapists, physical therapists, speech-language pathologists, recreational therapists.

Assisting/Adjunct fields support other health professionals and usually entail primarily either direct patient care or hands-on applications. These fields are minimally to moderately selective/competitive and usually require minimal levels of science/mathematics. Some can be completed with just a certificate; others require an associate's degree, a bachelor's degree, or even a bachelor's degree plus certificate.

- Examples: technologists, technicians, assistants, or aides.

Educational fields assist patients and people with their health and with the healthcare system. Selectivity depends upon the program and degree sought, ranging from associate's to bachelor's degrees, post-baccalaureate certificates, and graduate-level degrees. These fields require little to no science/mathematics, but some science/mathematics usually provides an advantage. Some require a background in education or counseling, and a strong foundation in the humanities or social sciences is helpful. Strong interpersonal skills are usually essential.

- Examples: dietary managers, biomedical writers, mental health workers, health educators, health science librarians.

Administrative fields assist or manage health organizations, not individual patients. Selectivity depends upon the program and degree sought. Degrees are offered at both undergraduate and graduate levels. Courses in science are advantageous but not usually required. Some degrees require a background in business, which includes mathematics, and most require a strong foundation in the social sciences.

- Examples: nursing home directors, geriatric care managers, health wellness coordinators, hospital public relations officers, quality assurance directors, medical secretaries, admitting officers.

Affiliated fields are independent but related to health care. These fields vary widely: some require direct patient care while others entail no patient care; some are science-based while others are based more in the social sciences; some are highly selective, others minimally selective. Most fields require a completed bachelor's degree plus a graduate-level degree, often a Ph.D.

- Examples: biomedical engineers, biostatisticians, social workers, epidemiologists, athletic trainers, environmental health scientists.

These categories provide a way of understanding the breadth of healthcare careers and can make it easier to advise students: as a first step, advisors can learn seven general pathways instead of scores of individual paths. More importantly, these categories can help advisors guide students in finding their best "fit" among healthcare careers – either in a related field within the same category, or in a different category altogether.

As examples, a pre-medical student may discover after a year or two that his or her strength does not lie in the sciences and changes to a better fit in an allied or educational field; a pre-nursing student who excels in science discovers while doing volunteer work that he or she does not enjoy nursing and switches to pharmacy; or a pre-medical student who excels in science and loves healthcare discovers he or she is uncomfortable working directly with patients and changes to an affiliated field such as biostatistics or epidemiology.

STEP 3: EIGHT ESSENTIAL STEPS

Although there are scores of different health fields, the basic steps in preparing to enter the fields' professional schools are often very similar. How well students manage these steps, with the assistance of their advisors, can significantly impact how competitive they will be when they apply.

Prerequisite courses must be completed in a timely manner in order for students to be eligible to graduate and/or apply to professional programs. These courses vary from school to school and program to program. Relevant issues include the acceptability of online, community college, and advanced placement courses; the need to take full-loads of the "science-major" courses with labs while earning above average grades; and whether requirements can be waived. To advise students well, advisors must be able to identify helpful resources, such as professional schools' Websites, teach their students to use available resources, and determine which courses at their institutions are equivalent to the schools' prerequisites.

Health-related experiences are essential in helping students confirm their desire to pursue a particular health profession. Most schools expect students to document their experiences in a variety of fields and in multiple settings. Advisors can establish shadowing programs but should expect students to make their own contacts and schedule their own shadowing visits.

- **Personal growth and development** are integral to the educational process for those pursuing careers in the health professions. Professional programs assess the personal attributes of applicants as well as their academic skills. Advisors should encourage their students to engage in volunteer and leadership activities that will help them learn about themselves and others. Pre-health students must learn to assess honestly their strengths, weaknesses, and suitability for a career of service.

- **Researching schools** should begin as early as possible. Advisors will need to have current and accurate resources available so students can learn about a variety of schools/programs. Students usually need assistance with narrowing their choices, making reasonable decisions, and choosing an appropriate program.

- **Entrance exams** are often a significant challenge for many students. Required exams vary from school to school and program to program, and students may need a variety of learning strategies to perform well. Advisors can create a chart for the major health professions that identifies the required exams, when they should be taken, and effective preparation techniques.

- **The application process** can sometimes be lengthy and complicated. To assist their students, advisors can create a Website with dates and deadlines, a "to do" checklist, links to relevant sources of information, and links to the various professional schools.

- **Preparing for interviews** improves students' chances of being accepted into professional schools but also prepares students for life. Advisors can inform students about Websites that provide interviewing tips and feedback about the interview process at particular schools, set up mock interviews with representatives from the local professional schools, and enlist their institution's career development office to videotape and critique applicants.

- **Financial aid planning** to pay the high costs of matriculating at a professional school is essential, but frequently overlooked by both applicants and advisors. Perhaps the application process itself is so stressful that applicants are just relieved when accepted and do not worry about this final step. However, the predominance of loans as opposed to grants or scholarships that do not have to be repaid makes this step important. Advisors can offer resources on financial assistance (Websites and print materials, for example) that students can review for guidance. Financial aid directors can also provide help for students who are completing the myriad financial aid forms.

STEP 4: ESSENTIAL COMPONENTS OF A PRE-HEALTH ADVISING PROGRAM

Many of the challenges in pre-health advising come from aspects of the job that lie outside face-to-face advising with students. Part of the job is understanding those aspects and how they impact advising and, ultimately, the students. There is no normative pre-health program; each institution develops a unique structure that works for it.

When the structure is not working, however, or when it needs to be improved, assessing the following components may suggest a solution or at least a direction to explore. Understanding these components and how they are functioning can help advisors communicate a program's strengths and weaknesses to administrators. These components can also guide advisors in creating a plan of action.

- Funding/Resources
- Staffing
- Training
- Space
- Information Delivery
- Advising
- Tracking
- Assessment

STEP 5: ADVOCATING FOR YOUR PROGRAM

Pre-health programs thrive only when committed advisors advocate for them on a regular basis. Advisors must find ways to inform administrators about their programs, whether through annual written reports, inviting administrators to visit, or regular meetings. Administrators usually understand the link between funding and accountability, which means that advisors need to maintain statistics on the students' and the program's successes, challenges, and needs.

STEP 6: PROFESSIONAL DEVELOPMENT

Participating in professional development activities requires both time and money, but advisors cannot advise well without the current information, innovative ideas, professional experiences, and collaborations that hone advising skills. A poorly prepared advisor is worse than no advisor at all. To remain abreast of this rapidly-changing field, pre-health advisors should participate actively in professional associations such as the National Academic Advising Association (NACADA) and the National Association of Advisors for the Health Professions (NAAHP). Both associations provide online and printed materials, conferences, and Webcasts on relevant trends and topics. A wealth of literature about pre-health advising is readily available, and in-state professional schools often sponsor training sessions and open houses. An additional and significant benefit of professional development is the many opportunities to form relationships with other advising colleagues.

STEP 7: PRE-HEALTH ADVISING RESOURCES

National Academic Advising Association (NACADA):

Regional organizations: 11 regions, including international membership

Website: www.nacada.ksu.edu

Journal: [The NACADA Journal](#)

[Health Professions Advising Community](#)

Clearinghouse [Academic Advising Resources](#)

National Association of Advisors for the Health Professions (NAAHP):

Regional organizations: CAAHP, NEAAHP, SAAHP, WAAHP

Website: www.naahp.org

Journal: *The Advisor*

Health Professions listserv: hlthprof@list.msu.edu

Text: *Health Professions Admission Guide: Strategies for Success*, edited by Carol Baffi-Dugan, 11th edition.

General Health Professions References:

Health Professions Careers Directory, American Medical Association.

Occupational Outlook Handbook (OOH), <http://www.bls.gov/ooh>

Top 100 Health-Care Careers, Dr. Saul & Edith Wischnitzer, 3rd edition.

Professional Associations:

Alpha Epsilon Delta National Health Preprofessional Honor Society ([AED](#))

Dentistry: American Dental Association ([ADA](#))

American Dental Education Association ([ADEA](#))

Medicine: American Medical Association ([AMA](#))

Association of American Medical Colleges ([AAMC](#))

Medicine, Chiropractic: American Chiropractic Association ([ACA](#))

Council on Chiropractic Education ([CCE](#))

Medicine, Naturopathic: Council on Naturopathic Medical Education ([CNME](#))

Medicine, Osteopathic: Association of American Colleges of Osteopathic Medicine ([AACOM](#))

Nursing: American Nursing Association ([ANA](#))

National League for Nursing ([NLN](#))

Occupational Therapy: American Occupational Therapy Association ([AOTA](#))

Optometry: Association of Schools and Colleges of Optometry ([ASCO](#))

Pharmacy: American Association of Colleges of Pharmacy ([AACP](#))

Physical Therapy: American Physical Therapy Association ([APTA](#))

Physician Assistant: American Academy of Physician Assistants ([AAPA](#))

Physician Assistant Education Association ([PAEA](#))

Podiatry: Association of American Colleges of Podiatric Medicine ([AACPM](#))

Public Health: American Public Health Association ([APHA](#))

Veterinary: American Veterinary Medical Association ([AVMA](#))

Association of American Veterinary Medical Colleges ([AAVMC](#))

Schools and Colleges, Admission Requirements:

Dentistry: [Official Guide to Dental Schools](#) (OGDS) by ADEA

Medicine: *Medical School Admission Requirements* ([MSAR](#)) by AAMC

Nursing: American Association of Colleges of Nursing, www.aacn.nche.edu

Optometry: *Schools and Colleges of Optometry Admission Requirements* ([SCOAR](#)) by ASCO

Osteopathy: [Osteopathic Medical Colleges Information Booklet](#) by AACOM

Pharmacy: *Pharmacy School Admission Requirements* by [AACP](#)

Podiatry: *Podiatric Medical Information College Book* by [AACPM](#)

Public Health: Association of Schools of Public Health, www.aspph.org

Veterinary Medicine: [Veterinary Medical School Admission Requirements](#) (VMSAR)

Application Services:

Dentistry: AADSAS <https://portal.aadsasweb.org/>

Medicine: AMCAS <https://www.aamc.org/students/applying/>

Osteopathy: AACOMAS <https://aacomas.liaisoncas.com/>

Pharmacy: PharmCAS www.pharmcas.org

Physician Assistant: CASPA <https://portal.caspaonline.org>

Podiatry: AACPMAS www.e-aacpmas.org

Public Health: SOPHAS www.sophas.org

Veterinary: VMCAS www.aavmc.org

Websites:

Dentistry: www.ada.org, www.adea.org
Medicine: www.ama-assn.org, www.aamc.org
Medicine, Chiro: www.amerchiro.org, www.cce-usa.org
Medicine, Naturo: www.cnme.org
Medicine, Osteo: www.aacom.org, <https://aacomas.aacom.org>
Nursing: <http://nursingworld.org>, www.nln.org
Occupational Therapy: www.aota.org
Optometry: www.opted.org
Pharmacy: www.pharmacas.org, www.aacp.org
Physical Therapy: www.apta.org
Physician Assistant: www.aapa.org, www.paeaonline.org
Veterinary Medicine: www.avma.org, www.aavmc.org

Tests:

Dentistry (DAT): <https://www.ada.org/en/education-careers/dental-admission-testx>
Graduate Record Exam (GRE): www.gre.org
Medicine (MCAT): www.aamc.org/students/mcat
Optometry (OAT): <https://www.ada.org/en/oat>
Pharmacy (PCAT): www.pcatweb.info

Bingham, R. & Childress, B. (2008). Congratulations-you're the new pre-health advisor! Now what? Retrieved from the *NACADA Clearinghouse of the Academic Advising Resources Web*
Site: <http://www.nacada.ksu.edu/Resources/Clearinghouse/View-Articles/Pre-Health-Advising.aspx>

TOP 10 ADVISOR RESOURCES

1. EXPLORE HEALTH CAREERS

Explore Health Careers - www.explorehealthcareers.org is a free, multi-disciplinary, interactive health careers website designed to explain the array of health professions and provide easy access to students seeking information about health careers. This website is a joint initiative involving national foundations, professional associations, health career advisors, educational institutions, and college students.

2. HEALTH CARE CAREER DIRECTORY

Health Care Career Directory (*ISBN 1978-1603597166*) - published by the American Medical Association. This resource contains the most current and comprehensive information on more than 8,000 health profession educational programs at 2,800 institutions encompassing 77 different health care careers. All program data are contained in a chart format, allowing users to compare various programs and find the one that is the best fit.

Profession descriptions include:

- history of profession
- general duties of the profession
- employment demand outlook
- educational program descriptions
- information on licensure, certification and registration

3. AMERICAN MEDICAL ASSOCIATION

American Medical Association - www.ama-assn.org - Education & Careers section. Click "Careers in Health Care, then Health Care Career Directory for a list of information about 82 careers health care.

4. NATIONAL ASSOCIATION FOR ADVISORS FOR THE HEALTH PROFESSIONS (NAAHP)

National Association of Advisors for the Health Professions (NAAHP) - www.naahp.org The National Association of Advisors for the Health Professions serves as a resource for the professional development of health professions advisors. It is a representative voice with health professions schools and their professional associations, undergraduate institutions, and other health professions organizations.

5. ASSOCIATIONS SUPPORTING STUDENTS OF DIVERSITY

- www.snma.org Student National Medical Association
- www.lmsa.net Latino Medical Student Association
- www.aaip.org Association of American Indian Physicians
- www.amwa-doc.org American Medical Women's Association
- www.apamsa.org Asian Pacific American Medical Student Association
- www.anamstudents.org Assoc. of Native American Medical Students
- www.amsa.org/advocacy/action-committees/gender-sexuality/ LGBT committee in AMSA
- www.amsa.org/advocacy/action-committees/reach/ Minority Health committee in AMSA
- www.nammenational.org National Association of Minority Medical Educators
- www.thesaidonline.org Society for American Indian Dentists

You can also search for other associations at the following sites:

- www.healthfinder.gov Health and Human Services searchable database of organizations nationwide
- www.minorityhealth.org/members.php Association of Minority Health Professions Schools (by their Foundation)

6. SUMMER MEDICAL AND DENTAL EDUCATION PROGRAM

Summer Health Professions Education Program (SHPEP) – www.SHPEP.org is a FREE (full tuition, housing, and meals) six-week summer academic enrichment program that offers freshmen and sophomore college students intensive and personalized medical and dental school preparation.

7. STUDENTDOCTOR.NET – INTERVIEW FEEDBACK SECTION

StudentDoctor.Net - Interview Feedback Section - www.studentdoctor.net/interview-feedback is an interview feedback forum for students to write and share their experience and read about others' experiences at health professions interviews. Feedback provided for a variety of health professional programs, such as medical school, dental, optometry, pharmacy, podiatry, and veterinary medicine. Caution that this student driven website may not always provide accurate information, but can be helpful for students who are anxious about the interview experience.

8. ASPIRING DOCS

Aspiring Docs - www.aspiringdocs.org is part of an Association of American Medical Colleges (AAMC) campaign to raise awareness about the need for more diversity in medicine and to connect students to key resources, including podcasts, online community, and other helpful links.

9. OFFICIAL GUIDES

Official Guides are annual profession specific publications that highlight preparation, application process, selection procedures, and individual school profiles.

- Allopathic Medical School Admission Requirements (MSAR) - www.aamc.org
- American Association of Colleges of Osteopathic Medicine College Information Book - www.aacom.org
- Physician Assistant Education Association - www.paeaonline.org, click on "PA Program Directory" for a directory of Physician Assistant Training programs
- American Dental Education Association Official Guide to Dental Schools - www.adea.org
- Pharmacy School Admission Requirements (PSAR) - www.aacp.org
- Schools and Colleges of Optometry - Admission Requirements - www.opted.org,
- Veterinary Medical School Admission Requirements (VMSAR) - www.aavmc.org/vmcas/vmcas.htm
- American Physical Therapy Association guide to accredited programs - www.apta.org, click "Education Programs," "Student Resources," then "PT/PTA programs"
- American Association of Colleges of Podiatric Medicine – www.aacpm.org, click on "Applying to Colleges"

10. LOCAL HEALTH PROFESSIONS PROGRAMS

Local Health Professions Programs - Go directly to the source! The local health professions programs are happy to speak with counselors and advisors regarding their admissions requirements, articulation, and programs. Many host "Information Days" or an "Open House" that spotlight programs and often provide the opportunity to take a tour, meet current students, and connect with admissions personnel and faculty.

PRE-HEALTH PLAN FOR NON-SCIENCE MAJORS

Academic Considerations for Admission to Health Profession Training Programs

Different programs require different skill sets, and pre-requisite courses are designed to help you develop the skills you'll need. Each program is a little different from the others, and there are even schools within the same profession that want you to have different background preparation. Math is the best example – some medical schools require no math courses (although most applicants need some math background to take their science courses), and some may require up to two semesters of calculus and statistics. So, there's no easy way to know exactly what courses to take, but the following is a basic guideline for a few of the programs.

Requirement	CSULB Course	Med	Dental	Optometry	Pharmacy	Phys Asst	Phys Thrpy	Podiatry	Vet Med
Chem I w/lab	CHEM 111A	✓	✓	✓	✓	✓	✓	✓	✓
Chem II w/lab	CHEM 111B	✓	✓	✓	✓	✓	✓	✓	✓
Organic I w/lab	CHEM 220A & 223A	✓	✓	✓	✓	some		✓	✓
Organic II w/lab	CHEM 220B & 223B	✓	✓	✓	✓	some		✓	✓
Biology w/lab	BIOL 211	✓	✓	✓	✓	✓	✓	✓	✓
Biology w/lab	BIOL 212	✓	✓	✓	✓	✓	✓	✓	✓
Biology w/lab	BIOL 213	✓	✓	✓	✓	✓	✓	✓	✓
Physics I w/lab	PHYS 100A or 151	✓	✓	✓	✓	✓	✓	✓	✓
Physics II w/lab	PHYS 100B or 152	✓	✓	✓	✓	✓	✓	✓	✓
Calculus	MATH 119A or 122	some					few		some
Statistics	BIOL 260 or STAT 108	some	some				✓		some
Biochemistry	CHEM 441A or 448	some	few						many
Microbiology	BIOL 211 or 200		few	some	some	some	some		some
Anatomy & Physio. w/lab	A: BIOL 207 or 342 & 342L; Physio: BIOL 208		few	some	some	some	✓		some
English	ENGL 100, 102, 300	most	many	some	some	some		✓	some
Others		PSY/SOC for MCAT, Adv. Bio.	Advanced Biology	PSY., other humanities or soc. sci.	ECO, Public Speaking	PSY (intro & abnormal)	PSY, social sciences	Advanced Biology	varies widely

All requirements must be taken for a grade, not P/D/F. While this handout is representative of the general requirements, specific schools may have specific requirements. While these are the most common requirements for admission to a health professions training program, individual schools and professions may have additional requirements. For example, Texas schools require another full year of Biology courses. Many California schools will only accept AP on a case by case basis, and prefer that students not use AP to fulfill their prerequisites.

NAAHP HEALTH PROFESSIONS CENTRALIZED APPLICATION SERVICES AT-A-GLANCE

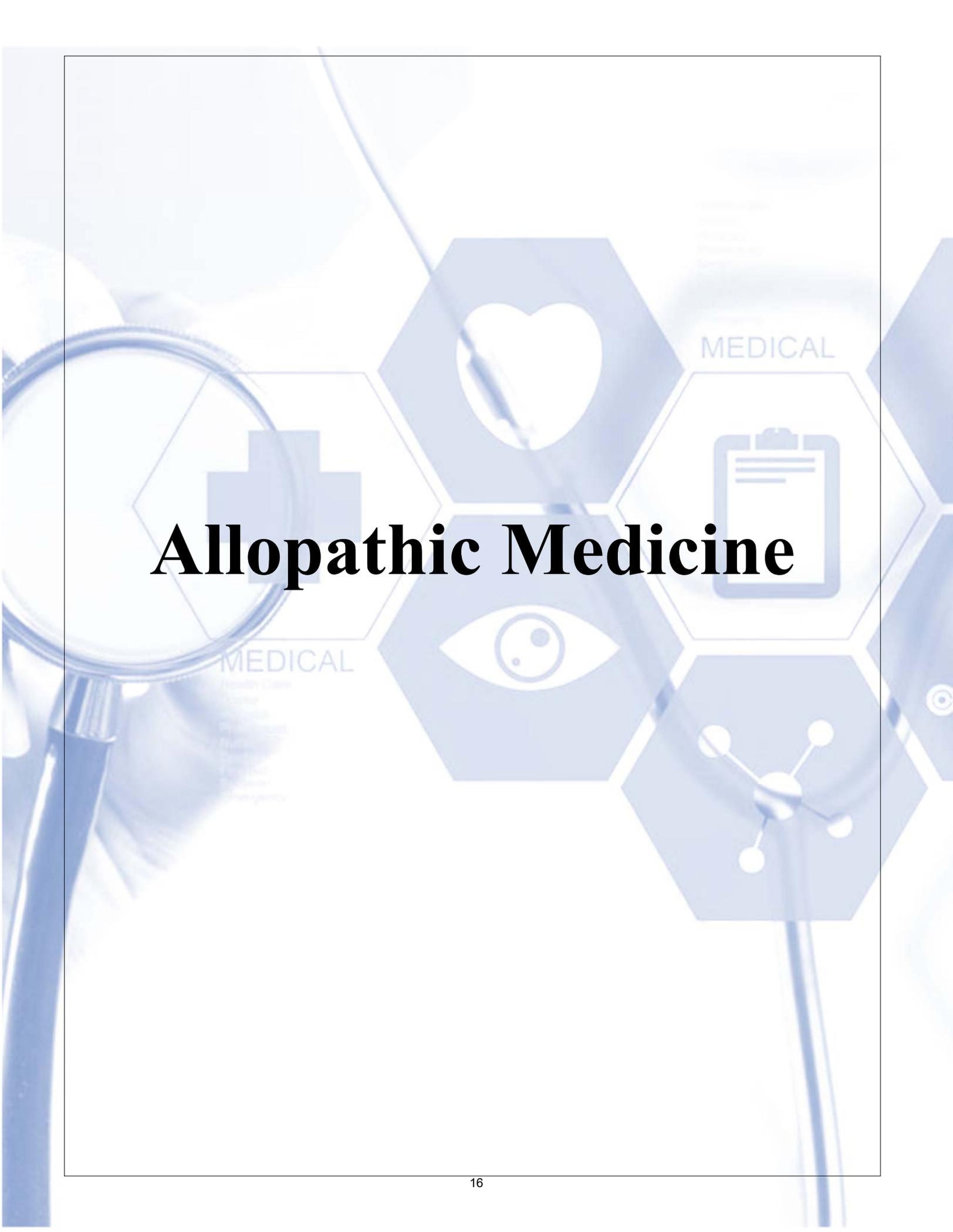
	AUDIOLOGY	DENTISTRY	HEALTH ADMINISTRATION	MEDICINE – ALLOPATHIC	MEDICINE – OSTEOPATHIC	MEDICINE, DENTISTRY & VET – TEXAS
Professional Association	AAA American Association of Audiology	ADEA American Dental Education Association	AUPHA Association of University Programs in Health Admin.	AAMC Association of American Medical Colleges	AACOM American Assoc. of Colleges of Osteopathic Medicine	
Centralized Application Service (CAS)	CSDCAS Communication Sciences & Disorders Centralized Application Service	AADSAS Associated American Dental Schools Application Service	HAMPCAS Health Admin, Management & Policy Centralized Application Service	AMCAS American Medical College Application Service	AACOMAS American Assoc. of Colleges of Osteopathic Medicine Application Service	TMDAS Texas Medical and Dental Schools Application Service
CAS URL	csdcas.liasoncas.com	portal.aadsasweb.org	hampcas.liasoncas.com	www.aamc.org/amcas	aacomas.liasoncas.com	www.tmdsas.com
# CAS Participating Schools	30	65	45 of 132 graduate level programs	145 US and 7 Canadian medical schools	All DO programs except UNTHSC-TCOM, which is part of TMDAS (see below)	10 medical, 3 dental and 1 veterinary school
Opening Date	August	June	September	Opens: May / Submit: June	May	May
Deadlines	Nov - Apr for Fall start	Latest are February	Varies widely	August through December	December through April	September
Letters of Recommendation	Three to five individual online evaluations submitted through CSDCAS.	Four individual evaluations or one committee letter submitted electronically through AADSAS.	Individual online evaluations submitted through HAMPCAS. Check for school-specific requirements regarding references.	Individual letters and/or committee letter submitted electronically through AMCAS.	Individual letters and/or committee letter submitted electronically through AACOMAS or directly to schools (check school specific requirements).	Medical & Dental: Individual letters and/or committee letter to TMDAS. Vet: TAMU form to TMDAS. Letters can be sent electronically or by mail.
Standardized Test Scores	GRE Scores are submitted electronically to CSDCAS directly from ETS	Official DAT scores are downloaded by dental schools through a DAT website. When registering for the DAT, applicants should indicate all the schools where they want their official DAT scores sent.	GREs are self-reported into application, then sent directly to schools.	MCAT Scores are automatically sent to AMCAS for distribution to applied participating schools once the applicant scores are available.	Applicants must release scores to AACOMAS electronically through use MCAT score reporting system. Students must provide their AAMC ID on the MCAT section of the AACOMAS application.	Medical: Release scores to TMDAS electronically through MCAT score reporting system. Dental & Vet: release scores directly to schools.
Transcripts	Official transcripts should be sent to CSDCAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to AADSAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to HAMPCAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to AMCAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to AACOMAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to TMDAS for any US / Canadian college/ university attended
Application Fee	\$125 for first program \$50 for each additional	\$245 for first program \$98 for each additional	\$115 for first program \$40 for each additional	\$160 for first school \$38 for each additional	\$195 for first program \$40 for each additional	\$150 flat fee
Income-Based Fee Assistance	Covers single application; limited quantity	Covers three schools; limited quantity	None	aamc.org/fap	Covers single application; limited quantity	None
Application Service Contact Info	617-612-2030 csdcasinfo@csdcas.org	617-612-2045 aadsasinfo@aadsasweb.org	617-612-2882 hampcasinfo@hampcas.org	202-828-0600 amcas@aamc.org	617-612-2889 aacomasinfo@liasioncas.com	512-499-4786 info@tmdsas.com

NAAHP HEALTH PROFESSIONS CENTRALIZED APPLICATION SERVICES AT-A-GLANCE

	NATUROPATHIC	NURSING	OCCUPATIONAL THERAPY	OPTOMETRY	PHARMACY	PHYSICAL THERAPY
Professional Association	AANMC Assoc. of Naturopathic Medicine Colleges	AACN American Association of Colleges of Nursing	AOTA American Occupational Therapy Association	ASCO Association of Schools and Colleges of Optometry	AACP American Association of Colleges of Pharmacy	APTA American Physical Therapy Association
Centralized Application Service (CAS)	NDCAS Doctor of Naturopathic Medicine Centralized Application Service	NursingCAS Nursing's Centralized Application Service	OTCAS Occupational Therapy Centralized Application Service	OptomCAS Optometry Centralized Application Service	PharmCAS Pharmacy College Application Service	PTCAS Physical Therapist Centralized Application Service
CAS URL	ndcas.liaisoncas.com	nursingcas.liaisoncas.com	otcas.liaisoncas.com	www.optomcas.org	www.pharmcas.org	www.ptcas.org/home.aspx
# of CAS Participating Schools	4 of 7	195	104 of 156	23 of 23	126 of 138	219 of 244
Opening & Submission Date	August	August	July	Late June / early July	July	July
Deadlines	Varies	Varies	Varies	December through June	November through March	October through May
Letters of Recommendation	Individual letters and/or committee letter submitted electronically through NDCAS.	Individual online evaluations submitted through NursingCAS.	Three to five Individual letters submitted electronically through OTCAS.	Up to four individual online evaluations submitted through OptomCAS.	Up to four Individual letters submitted electronically through PharmCAS.	Up to four Individual letters submitted electronically through PTCAS.
Standardized Test Scores	Students have the option to self-report IELTS and TOEFL scores.	GRE Scores can be submitted electronically to NursingCAS directly from ETS using a school-specific NursingCAS GRE code.	GRE Scores can be submitted electronically to OTCAS directly from ETS using a special OT program-specific OTCAS GRE code	Official scores should be sent directly to schools	Arrange for Pearson to send PCAT scores to PharmCAS at School Code 104 and enter your PCAT CID number on your PharmCAS application.	Official scores should be sent directly to schools
Transcripts	Official transcripts should be sent to NDCAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to NursingCAS by the Registrar of any US / Canadian college/ university attended	OTCAS requires an official copy of your transcript for each U.S. and Canadian institution attended	Official transcripts should be sent to OptomCAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to PharmCAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to PTCAS by the Registrar of any US / Canadian college/ university attended
Application Fee	\$115 for first program \$40 for each additional	Undergrad: \$45 for first, \$30 each add'l Grad: \$65 for first, \$35 each additional	\$140 for first program \$60 for each additional	\$170 for first program \$70 for each additional	\$150 for first program \$55 for each additional	\$140 for first program \$45 for each additional
Income-Based Fee Assistance	None	None	Covers single application; limited quantity	None	Covers single application; limited quantity	Covers single application; limited quantity
Application Service Contact Info	617-612-2950 ndcasinfo@ndcas.org	617-612-2880 nursingcasinfo@nursingcas.org	617-612-2860 otcasinfo@otcas.org	617-612-2888 optomcasinfo@optomcas.org	617-612-2050 617-612-2060 TTY info@pharmcas.org	617-612-2040 ptcasinfo@ptcas.org

NAAHP HEALTH PROFESSIONS CENTRALIZED APPLICATION SERVICES AT-A-GLANCE

	PHYSICIAN ASSISTANT	PODIATRIC MEDICINE	PUBLIC HEALTH	SPEECH PATHOLOGY	VETERINARY MEDICINE	
Professional Association	PAEA Physician Assistant Education Association	AACPM American Association of Colleges of Podiatric Medicine	ASPPH Association of Schools and Programs of Public Health	ASHA American Speech-Language Hearing Association	AAVMC Association of American Veterinary Medical Colleges	
Centralized Application Service (CAS)	CASPA Central Application Service for Physician Assistants	AACPMAS American Association of Colleges of Podiatric Medicine Application Service	SOPHAS Schools of Public Health Application Service	CSDCAS Communication Sciences & Disorders Centralized Application Service	VMCAS Veterinary Medical College Application Service	
CAS URL	caspa.liaisoncas.com	aacpmas.liaisoncas.com	sophas.org	csdcas.liaisoncas.com	www.aavmc.org/vmcas	
# of CAS Participating Schools	217 of 210 programs and 19 developing programs	All 9 schools and colleges	89	126	29 US, 2 Canadian, and 7 international colleges	
Opening & Submission Date	April	August	August	August	May	
Deadlines	June through March	April through June	Varies	Nov - Apr for Fall start	September	
Letters of Recommendation	Three to five individual online evaluations submitted through CASPA	Send directly to school.	Three to five individual online evaluations submitted through SOPHAS	Three to five individual online evaluations submitted through CSDCAS	Three to six individual online evaluations submitted through VMCAS	
Standardized Test Scores	Official GRE Scores are submitted electronically to CASPA directly from ETS using special CASPA GRE codes	Applicants must release scores to AACPMAS electronically through use MCAT score reporting system	Official GRE Scores are submitted electronically to SOPHAS directly from ETS using special SOPHAS GRE codes	Official GRE Scores can be submitted electronically to CSDCAS directly from ETS using special GRE codes	VMCAS allows you to enter scores for GRE, MCAT, IELTS, and TOEFL. Official GRE Scores can be submitted electronically to VMCAS directly from ETS using special GRE codes	
Transcripts	Official transcripts should be sent to CASPA by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to AACPMAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to SOPHAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to CSDCAS by the Registrar of any US / Canadian college/ university attended	Official transcripts should be sent to VMCAS by the Registrar of any US / Canadian college/ university attended	
Application Fee	\$175 for first program \$50 for each additional	\$180 for first program \$45-60 for each additional	\$135 for first program \$50 for each additional	\$125 for first program \$50 for each additional	\$200 for first program \$100 for each additional	
Income-Based Fee Assistance	Covers single application; limited quantity		Covers single application; limited quantity. Some service-based waivers offered.	Covers single application; limited quantity	Limited quantity of fee reimbursements available	
Application Service Contact Info	617-612-2080 caspainfo@caspaonline.org	617-612-1900 aacpmasinfo@aacpmas.org	617-612-2090 sophasinfo@sophas.org	617-612-2030 csdcasinfo@csdcas.org	617-612-2884 vmcasinfo@vmcas.org	



Allopathic Medicine

About Being a Doctor

Physicians diagnose and care for people of all ages who are ill or have been injured. They are life-long learners, good listeners, and problem solvers, and are intrigued by the ways medicine can be used to improve life. Doctors are interested in science, the intricacies of human body's systems, and care deeply about helping people to relieve pain, restore health, and promote well-being.

What are some daily activities/experiences of physicians?

- Diagnose and care for people of all ages who are ill or have been injured
- Take medical histories
- Perform physical examinations
- Conduct diagnostic tests
- Recommend and provide treatment
- Advise patients on their overall health and well-being

What are 3-5 personal characteristics important for happiness and success in the medical profession?

- Interpersonal skills
- Intrapersonal skills
- Thinking and reasoning
- Science

For a more detailed list of competencies for success in medicine, please see the [AAMC Core Competencies for Entering Medical Students](#) web page.

While intellectual capacity is important to success as a physician, so too are other attributes—those that have the ability to develop and maintain effective relationships with patients, work collaboratively with other team members, act ethically and compassionately, and in many other ways master the “art” of medicine. An AAMC publication entitled *Learning Objectives for Medical Student Education: Guidelines for Medical Schools* (AAMC [Medical School Objectives Project \(MSOP\)](#) web page) describes the personal attributes required of a physician. While making note of the fact that graduating medical students must be knowledgeable about medicine and skillful in its application, the publication also emphasizes how vital it is for future doctors to:

- Make ethical decisions
- Act with compassion, respect, honesty, and integrity
- Work collaboratively with team members
- Advocate on behalf of one's patients
- Be sensitive to potential conflicts of interest
- Be able to recognize one's own limits
- Be dedicated to continuously improving one's knowledge and abilities
- Appreciate the complex non-biological determinants of poor health
- Be aware of community and public health issues
- Be able to identify risk factors for disease
- Be committed to early identification and treatment of diseases
- Accept responsibility for making scientifically based medical decisions
- Be willing to advocate for the care of the underserved

Updated: January 2018

For more information on many health professions, we recommend the NAAHP publication, [Health Professions Admission Guide: Strategies for Success](#), available on the NAAHP website.

What are 3-5 key questions students should ask themselves as they prepare for a career in medicine?

- Do you like challenges?
- Are you interested in science and how the body works?
- Do you care deeply about other people, their problems, and their pain?
- Do you enjoy learning?
- Are you intrigued by the ways medicine can be used to improve life?

Preparing for Admission:

- **Prerequisite coursework:** varies by school. Use MSAR (below) or individual school websites to explore prerequisites.
- **Standardized Tests:** Medical College Admission Test® (MCAT®) – www.aamc.org/mcat
- **Experience/Exposure:** students-residents.aamc.org/applying-medical-school/preparing-med-school/getting-experience/
- **Letters of Recommendation:** Schools generally prefer a committee or composite letter if available from the applicant's premedical program of study (undergrad or postbac program). If no such letter is available, students should follow school's guidelines to determine what letters are required.
- **Resources for researching schools:** AAMC Medical School Admissions Requirements™ website – www.aamc.org/msar

The Admissions Cycle:

- American Medical College Application Service® (AMCAS®) for most MD and MD/PhD programs: www.aamc.org/amcas
 - Application opens: May
 - Application can be submitted: June
 - Application deadlines: AMCAS application deadline dates vary by school and are listed on the [AMCAS Schools and Deadlines](#) page. Early decision deadline is August 1, regular deadlines range from August through December.
 - Application closes: Varies by school
 - Number of schools participating: 149 accredited US and 17 accredited Canadian medical schools: 7 Texas schools do not participate in AMCAS.
 - Fees: \$160 for first school, \$39 for each additional (for the 2018 cycle)
 - Fee waivers: Fee Assistance Program, www.aamc.org/fap
 - Letters of evaluation logistics: Committee/composite letter preferred if available from undergraduate institution. Letters should be uploaded via AAMC Letter Writer Service for participating schools. [Learn more about letters guidelines.](#)
 - Standardized test logistics: MCAT scores are automatically sent to AMCAS for distribution to designated participating schools.
 - Transcripts: Applicants should send all transcripts to AMCAS attached to an AMCAS Transcript Request Form.
 - AMCAS resources, including the AMCAS Applicant Guide: students-residents.aamc.org/applying-medical-school/applying-medical-school-process/applying-medical-school-amcas/amcas-tools-and-tutorials
 - AMCAS FAQs: students-residents.aamc.org/applying-medical-school/faq/amcas-faq
 - Background checks: The AAMC-facilitated Criminal Background Check service is run through Certiphi Screening, Inc. [Click here](#) for more information.

- Contact information: amcas@aamc.org, (202) 828-0600
- Advisor Information System: <https://services.aamc.org/ais2>
- CAS for MD and DO programs at Texas public schools: www.tmdsas.com/applytmdsas/
 - Application opens: May
 - Application can be submitted: May
 - Application deadline: September 30
 - Number of schools participating: 10 medical schools participate in TMDAS
 - Fees, fee waivers: include information about how much it costs for the first school, each additional, whether fee waivers are available, if so, URL for more information
 - Letters of rec logistics: are letters sent through a portal and distributed by the portal? Should they be sent to the individual schools?
 - Standardized test logistics: are scores sent through a portal and distributed by the portal? Should they be sent to the individual schools?
 - Transcripts: are transcripts sent through a portal and distributed by the portal? Should they be sent to the individual schools?
 - Advisor Portal: <https://www.tmdsas.com/TMDAdvisor/>

The Admissions Process for the 2017 application cycle:

- Approximate dates of interviews, offers: rolling
- Total number of applicants in 2017 cycle: 51,680
- Average # of designations per student: 15.6
- Total number of first year students: 21,338
- Test score averages and ranges in the 2017 cycle:
 - Overall MCAT mean for applicants :
 - Total Score: 504.7
 - Biological and Biochemical Foundations of Living Systems: 126.4
 - Chemical and Physical Foundations of Biological Systems: 126.2
 - Psychological, Social, and Biological Foundations of Behavior: 126.5
 - Critical Analysis and Reasoning Skills: 125.7
- Approximate Total number of students: 88,000 and 124,000 resident physicians
- For additional information about the applicant pool, see AAMC FACTS Tables: www.aamc.org/data/facts/

Learn More about an M.D. Career

Training & Career Opportunities

- Number of years: four year doctoral degree
- Degree attained: Doctor of Medicine (MD)
- Total number of graduates in 2016-2017 academic year: 19,254

NAAHP/AAMC Fact Sheet for Health Professions Advisors
About MD Careers

Key Resources for Students

- AAMC Resources for Pre-Med Students: students-residents.aamc.org/
- Aspiring Docs: aamc.org/aspiringdocs

Key Resources for Advisors

Website: AAMC Resources for Pre-Health Advisors: aamc.org/advisors

- Pre-health Advisors Support:
 - Email: advisors@aamc.org
 - Telephone: 202-828-0950

Social Media

- AAMC Pre-Med - [Facebook](#)
- AAMC Pre-Med - [Twitter](#)
- MCAT - [Twitter](#)
- AMCAS - [Twitter](#)

Advisory Council Professional Association Partner Information

- **Association of American Medical Colleges**, www.aamc.org
- **Mission**
The AAMC serves and leads the academic medicine community to improve the health of all.
- **Size of organization, Number of member institutions**
The AAMC represents 149 accredited U.S. and 17 accredited Canadian medical schools; nearly 400 major teaching hospitals and health systems. Through these institutions and organizations, the AAMC represents 167,000 faculty members, 88,000 medical students, and 124,000 resident physicians.

Advisory Council Contact Information

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Updated: January 2018

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.

PHYSICIAN (M.D.)

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Physicians are dedicated to serving the health care needs of society through diagnosing and treating illness, injury, and disease. Anesthesiologists, pathologists, radiologists, surgeons, and emergency physicians, spend the majority of their time working in hospitals or surgical outpatient centers. About one third of physicians in the U.S. work in primary care, acting as the first health professional consulted by patients. Most primary care physicians provide comprehensive health care to patients and families and tend to see the same patients over a long period of time. When necessary, primary care physicians refer patients to medical specialists and surgeons for further expertise. Most physicians work in small offices, clinics or in group medical practices where they see patients. Physicians often work long, irregular hours, and rotate shifts for emergency calls, as well as travel between the office and hospital to care for patients.

Though earnings vary according to number of years in practice, type of practice, geographical location, and specialty, the total median annual income of physicians was \$187,200 (Occupational Outlook Handbook, 2016). The salary can also range from \$150,000 - \$300,000 depending on the specialty and area of practice. With recent changes in the health care system, there are fewer individual practices, and more physicians joining medical groups or networks. As employees of these medical groups, more physicians are drawing a set salary, so earnings potential may be more limited than in the past when most physicians worked for themselves. Employment of physicians and surgeons will grow faster than average (14%) for all occupations through 2024, as a result of current doctors set to retire, continued expansion of the health care industries, and an aging population. Job prospects should be good for physicians looking to practice in rural and low-income areas, which are often underserved (OOH, 2014).

MEDICAL SCHOOL EDUCATION (4 DEMANDING YEARS)

There are 145 accredited **allopathic** medical schools in the U.S. and 17 accredited Canadian medical schools that award the degree of Medical Doctor (M.D.). Medical school usually requires 4 academic years. Studies begin with 2 years of classroom instruction in the basic sciences. The normal structure and function of human systems are taught through gross anatomy, cell biology, biochemistry, medical genetics, behavioral science, physiology, and neuroscience. Subsequently, the education focus shifts to abnormalities of structure and function, disease, and general therapeutic principles through exposure to microbiology, immunology, pathology, and pharmacology. The following two years involve a series of clinical rotations throughout inpatient and outpatient settings where students work with patients under the supervision of attending physicians and medical residents. During the clinical years, students also have an opportunity to take elective rotations. During the last year of medical school, students make decisions about medical specialty and apply for internship or residency programs in their desired area of expertise (The Official Guide to Medical School Admissions, 2014).

RESIDENCY AND FELLOWSHIP TRAINING (3-8 YEARS)

Following medical school, graduates begin their medical residency, which is paid, on-the-job training in a specialty. The training required varies from 3 to 8 years or more depending on the specialty selected. Family Practice, Emergency

Medicine, Pediatrics, and Internal Medicine require 3 years. Training in Obstetrics and Gynecology, Pathology, Anesthesiology, Dermatology, Neurology, Nuclear Medicine, Ophthalmology, Physical Medicine, Psychiatry, Radiology and Radiation Oncology requires 4 years. The *surgical specialties* including General, Neurological, Orthopedic Otolaryngology, and Urology each require 5 years of residency. Most specialties also offer advanced training in a subspecialty usually requiring an additional 1 to 3 years of fellowship following residency.

PRE-MEDICAL PREPARATION

Due to the competitive nature of the medical school application process and rigorous training required, students should carefully consider their motivation, preparation, and commitment for a career in medicine. In 2016 a total of 53,042 applicants applied to medical school and 21,030 applicants were offered admissions to at least one school. The fall 2016 entering class had a mean science **GPA of 3.64**, a mean non-science **GPA of 3.78** and **TOTAL GPA of 3.70**. MCAT score was 508.7.

No particular major is required or preferred for medical school admissions, thus students are advised to select a major they find interesting and in which they can excel. Students should also consider a major that may lead them to an alternate career, should they decide not to pursue a medical education. Whichever major a student declares, their course of study must incorporate the required pre-medical requirements (please also keep in-mind CSULB's Timely Graduation Policy and see an Academic Advisor if you have questions). Many students who select a natural science major find a great deal of overlap between their major requirements and those required for medical school. Regardless of the major choice, medical schools prefer that students have a well-rounded liberal arts education.

COURSE REQUIREMENTS

CSULB Courses which fulfill admission requirements for the [UC Riverside School of Medicine](#):

Students maintain responsibility for verifying course selection with individual programs.

Coursework	CSULB Courses
One year of English	ENGL 100 OR ASAM 100 OR AFRS 100 OR CHLS 104 AND ENGL 102 OR 300, CWL 315
One year of Mathematics (to include calculus and statistics)	MATH 119A OR 122 AND STATS 108 OR BIOL 260, other statistic courses may be applicable
One year of General Chemistry with lab	CHEM 111A & 111B
One year of Organic Chemistry with lab	CHEM 220A & 220B + 320L (Chemistry/ Biochemistry majors) OR 220A w/223A & 220B w/223B (Biology & Other majors)
One year of General Biology with lab	BIOL 211, 212 & 213
One year of General Physics with lab	PHYS 100A & 100B OR 151 & 152
Biochemistry	Recommended: CHEM 441A OR 448
Spanish	Recommended
Humanities	Recommended

ADDITIONAL RESOURCES

- [Medical School Admissions Requirements \(MSAR\)](#)
- [Medical College Admission Test \(MCAT\)](#)
- [American Medical College Application Service \(AMCAS\)](#)

For more information about Allopathic Medicine, visit www.aamc.org/students and see your HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events

California Physician Workforce Profile

2	State Population:	39,250,017	Total Female Physicians:	38,524
0	Population ≤ age 21	11,196,565	Total MD or DO Students:	7,387
1	Total Active Physicians:	105,907	Total Residents:	10,429
6	Primary Care Physicians:	36,700		

For additional data, including maps and tables, please see the 2017 State Physician Workforce Data Report online at www.aamc.org/2017statedatareport

		CA	CA Rank	State Median
Physician Supply	Active Physicians per 100,000 Population, 2016	269.8	19	257.6
	Total Active Patient Care Physicians per 100,000 Population, 2016	236.0	23	227.2
	Active Primary Care Physicians per 100,000 Population, 2016	93.5	22	90.8
	Active Patient Care Primary Care Physicians per 100,000 Population, 2016	84.8	22	82.5
	Active General Surgeons per 100,000 Population, 2016	7.3	31	7.7
	Active Patient Care General Surgeons per 100,000 Population, 2016	6.3	36	6.9
	Percentage of Active Physicians Who Are Female, 2016	36.4%	15	33.8%
	Percentage of Active Physicians Who Are International Medical Graduates (IMGs), 2016	24.1%	15	19.1%
	Percentage of Active Physicians Who Are Age 60 or Older, 2016	33.4%	8	30.3%
Undergraduate Medical Education (UME)	MD and DO Student Enrollment per 100,000 Population, AY 2016-2017	18.8	43	32.7
	Student Enrollment at Public MD and DO Schools per 100,000 Population, AY 2016-2017	8.6	41	21.2
	Percentage Change in Student Enrollment at MD and DO Schools, 2006-2016	20.7%	28	24.6%
	Percentage of MD Students Matriculating In-State, AY 2016-2017	37.0%	41	65.6%
Graduate Medical Education (GME)	Total Residents/Fellows in ACGME Programs per 100,000 Population as of December 31, 2016	26.6	31	28.1
	Total Residents/Fellows in Primary Care ACGME Programs per 100,000 Population as of Dec. 31, 2016	9.5	33	10.6
	Percentage of Residents in ACGME Programs Who Are IMGs as of December 31, 2016	10.5%	45	20.5%
	Ratio of Residents and Fellows (GME) to Medical Students (UME), AY 2015-2016	1.5	7	1.0
	Percent Change in Residents and Fellows in ACGME-Accredited Programs, 2006-2016	12.8%	35	17.6%
Retention	Percentage of Physicians Retained in State from Undergraduate Medical Education (UME), 2016	62.8%	1	38.5%
	Percentage of Physicians Retained in State from Public UME, 2016	68.7%	1	44.1%
	Percentage of Physicians Retained in State from Graduate Medical Education (GME), 2016	70.4%	1	44.9%
	Percentage of Physicians Retained in State from UME and GME Combined, 2016	81.0%	2	69.0%

State Rank: How the state ranks compared to the other 49. Rank of 1 goes to the state with the highest value for the category.

State Median: The value in the middle of the 50 states, with 25 states above the median and 25 states below (excludes the District of Columbia and Puerto Rico).

Source: 2017 State Physician Workforce Data Report

California Physician Workforce Profile

Specialty	Total Active		Female		Age 60 or Older	
	Physicians	People Per Physician	Number	Percent	Number	Percent
All Specialties	105,907	371	38,524	36.4	35,372	33.4
Allergy & Immunology	594	66,077	216	36.4	262	44.1
Anatomic/Clinical Pathology	1,619	24,243	580	35.9	786	48.5
Anesthesiology	5,218	7,522	1,347	25.9	1,926	36.9
Cardiovascular Disease	2,276	17,245	343	15.1	1,174	51.6
Child & Adolescent Psychiatry**	1,100	10,179	565	51.4	326	29.7
Critical Care Medicine	1,124	34,920	303	27.0	91	8.1
Dermatology	1,774	22,125	870	49.1	603	34.0
Emergency Medicine	5,083	7,722	1,387	27.3	1,341	26.4
Endocrinology, Diabetes & Metabolism	817	48,042	382	46.8	301	36.8
Family Medicine/General Practice	13,094	2,998	5,544	42.5	4,260	32.6
Gastroenterology	1,612	24,349	302	18.8	633	39.3
General Surgery	2,853	13,757	631	22.1	1,019	35.7
Geriatric Medicine***	552	9,686	289	52.4	125	22.6
Hematology & Oncology	1,633	24,036	542	33.2	524	32.1
Infectious Disease	945	41,534	371	39.3	304	32.2
Internal Medicine	15,084	2,602	5,990	39.8	4,504	29.9
Internal Medicine/Pediatrics	371	105,795	198	53.4	11	3.0
Interventional Cardiology	300	130,833	26	8.7	19	6.3
Neonatal-Perinatal Medicine	645	60,853	333	51.6	242	37.5
Nephrology	1,161	33,807	354	30.6	353	30.4
Neurological Surgery	613	64,029	56	9.1	208	34.0
Neurology	1,559	25,176	466	29.9	653	41.9
Neuroradiology	365	107,534	94	25.8	22	6.0
Obstetrics & Gynecology	5,035	7,795	2,922	58.1	1,801	35.8
Ophthalmology	2,447	16,040	667	27.3	898	36.7
Orthopedic Surgery	2,302	17,050	173	7.5	1,066	46.3
Otolaryngology	1,137	34,521	240	21.1	377	33.2
Pain Medicine & Pain Management	550	71,364	93	17.0	87	15.8
Pediatrics**	7,521	1,489	4,734	63.0	2,439	32.4
Physical Medicine & Rehabilitation	1,031	38,070	359	34.9	269	26.1
Plastic Surgery	1,121	35,013	160	14.3	440	39.3
Preventive Medicine	909	43,179	331	36.5	495	54.5
Psychiatry	5,572	7,044	2,073	37.2	2,666	47.9
Pulmonary Disease	614	63,925	64	10.4	469	76.4
Radiation Oncology	555	70,721	167	30.1	157	28.3
Radiology & Diagnostic Radiology	3,237	12,125	817	25.3	1,330	41.1
Rheumatology	702	55,912	305	43.7	252	35.9
Thoracic Surgery	490	80,102	46	9.4	218	44.5
Urology	1,081	36,309	123	11.4	420	38.9
Vascular & Interventional Radiology	337	116,469	44	13.1	22	6.5
Vascular Surgery	357	109,944	54	15.1	115	32.2

Sources: AMA Physician Masterfile (December 31, 2016), Population estimates as of July 1, 2016 are from the U.S. Census Bureau (Release date: December 2016)

* Counts for specialties with fewer than 10 physicians are not shown

** Only those 21 years or younger are included in People Per Physician

*** Only those 65 years or older are included in People Per Physician

California Physician Workforce Profile

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0	Population ≤ age 21	11,196,565	Total MD or DO Students:	7,387
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For additional data, including maps and tables, please see the 2017 State Physician Workforce Data Report online at www.aamc.org/2017statedatareport

	Number	Percent	
State Where GME Was Completed for All Active Physicians in State	California	57,893	57%
	New York	8,587	9%
	Illinois	3,344	3%
	Pennsylvania	3,147	3%
	Massachusetts	2,896	3%
	Texas	2,471	2%
	Michigan	2,352	2%
	Ohio	2,119	2%
	New Jersey	1,252	1%
	Maryland	1,240	1%
	All other states	15,580	15%
Practice Location of Physicians Who Completed GME in State	California	57,893	71%
	Washington	2,043	2%
	Texas	1,850	2%
	Oregon	1,641	2%
	Florida	1,287	2%
	Arizona	1,198	1%
	New York	1,042	1%
	Colorado	990	1%
	Nevada	968	1%
	Massachusetts	824	1%
	All other states	12,368	15%

Notes:

GME = Graduate Medical Education

"All other states" includes physicians who completed GME in Canada.

Source: AMA Physician Masterfile (December 31, 2016)

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AAMC

Tomorrow's Doctors, Tomorrow's Cures®

Getting into Medical School

AAMC Resources and Services for Pre-Med Students



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About the Association of American Medical Colleges

Founded in 1876 and based in Washington, D.C., the Association of American Medical Colleges (AAMC) is a not-for-profit association representing all 147 accredited U.S. and 17 accredited Canadian medical schools; nearly 400 major teaching hospitals and health systems, including 51 Department of Veterans Affairs medical centers; and more than 80 academic societies. Through these institutions and organizations, the AAMC represents nearly 167,000 full-time faculty members, 88,000 medical students, and 124,000 resident physicians.

Through its many programs and services, the AAMC strengthens the world's most advanced medical care by supporting the entire spectrum of education, research, and patient care activities conducted by our member institutions. The AAMC and our members are dedicated to the communities we serve and steadfast in our desire to earn and keep the public's trust for the role we play in improving the nation's health.

Welcome to the AAMC—Your Trusted Resource for Official Guidance and Information for Pre-Med Students!

You are about to embark on the most exciting journey of your education and training, and you'll be making some of the most important decisions of your career.

At the AAMC, we're here to help you navigate the journey—from pre-med through residency and beyond—with reliable, trusted resources and services.

We hope that you find this booklet helpful in answering many of your questions about embarking on a career in medicine. We encourage you to visit our website to take advantage of the many resources we've created for you, including webinars, podcasts, inspiring stories, tools, and tips.

Also, be sure to connect with AAMC Pre-Med on social media to get the latest information and join us in discussions about pre-med topics.

We wish you the very best of success in a rewarding and fulfilling career in medicine!

AAMC Pre-Med Team

aamc.org/students



AAMC Pre-Med



@AAMCPreMed



Aspiring Docs

The AAMC's Aspiring Docs website provides resources and inspiration to help you get started on your path to medicine.



There's a lot of planning and preparation leading up to applying to medical school—so start exploring the great information on the Aspiring Docs website right away.

You'll find fact sheets with a wealth of information on:

- Partnering with your advisor
- Deciding if a career in medicine is right for you
- Getting lab experience, shadowing a doctor, and finding summer programs
- Preparing to take the MCAT® exam
- Applying to medical school or MD/PhD programs
- Making the most of a gap year
- Experiencing an anatomy lab, seeing a patient for the first time, and other experiences shared by current medical students
- And much more

Plus, you'll be able to read inspiring Q&A interviews with medical students, residents, and physicians about their personal stories—some of whom took a unique path to medicine or overcame challenges.

And, finally, be sure to follow pre-med, medical student, and resident bloggers as they share their experiences, challenges, and what keeps them motivated on their path to a career in medicine on [AspiringDocsDiaries.org](https://www.aspiringdocsdiaries.org).

[aamc.org/aspiringdocs](https://www.aamc.org/aspiringdocs)

Finding Volunteer and Lab Experiences

Two of the most important things that can help you decide if a career in medicine is right for you is getting volunteer experience in a medically related environment and getting lab experience. Volunteering will help you prepare for medical school in addition to enhancing your medical school application.

Each year, the number of medical school applicants who have significant medically related volunteer experience and/or lab experience grows. Many universities now require internships or a capstone course during the senior year of college. Working in a lab setting will help make you a competitive applicant; it will also help you determine if a career in medicine or medical research is right for you. Here are answers to common questions. Find more answers on the Aspiring Docs website at aamc.org/aspiringdocs.

Where can I find out about opportunities?

If you are still in school, your first step should be to talk with your academic or pre-health advisor. Also check to see if there is a campus office of community service or student activities that maintains a website or database. Check the science department bulletin boards or websites for opportunities to assist with faculty research projects. Join pre-med or service clubs because they're one of the best ways to hear about volunteer and research openings, make friends, and find out about conferences and other opportunities. Hospitals, clinics, labs, research facilities, charities, foundations, or other organizations may have volunteer opportunities listed online.

If you haven't started college or if you've already graduated, focus on networking. Call people you know—some of your best opportunities may come from within your own network of friends, family, and work and school contacts. Ask any of them if they know about open clinical or research positions or other available opportunities. Human resources departments at large research hospitals and universities in your area might be looking for lab technicians. Job opportunities are typically posted on the career pages of their websites.

Is it better to have one ongoing experience or many different experiences?

It's good to have a variety of experiences, but it's also important to show you've cultivated specific interests and are able to commit to an activity over a sustained period of time. You're more likely to gain significant responsibilities or leadership roles if you regularly volunteer with an organization. This also helps you network and develop relationships with potential mentors and other people who may later write your letters of evaluation.

When is the best time to look for a position?

According to Rivka Glaser, PhD, adjunct professor of biology at Stevenson University, if you're interested in a research or laboratory position for the following semester, the best time to look for positions is during the middle of the semester, or a week or two before midterms. There also tend to be a lot of research opportunities, both paid and volunteer, in the summer. Remember, typically there are more applicants than available spots, so complete your applications early.

Medical School Admission Requirements

One of the most important decisions you'll make is where to go to medical school. Rely on accurate data from a trusted source.

The AAMC's Medical School Admission Requirements resources provide the most comprehensive, up-to-date information and data.

The Official Guide to Medical School Admissions: How to Prepare for and Apply to Medical School

This is the most complete and trusted guide for medical school admissions and includes crucial information about the application process, financial resources, interview tips, and admissions criteria. Receive exclusive insight from the experts who manage the MCAT® exam and AMCAS® application, and get details on choosing the school that is the best fit for you, elements of the admission decision, diversity in medical schools, financing, applicant and matriculant data, and more. It includes worksheets to help you make strategic decisions during the application process. Available in print and ebook formats.

Medical School Admission Requirements for U.S. and Canadian Medical Schools

When you're ready to start researching medical schools, the Medical School Admission Requirements website is the most accurate resource for requirements, data, and information. This is the only comprehensive resource with current data that come directly from the AMCAS application and MCAT exam. Completely redesigned for 2017, the new site is mobile friendly, with enhanced search and filter options, dynamic charts, and an expanded compare feature. Review waitlist procedures, premedical coursework requirements, demographics of the entering class, admissions statistics, and more. Your one-year subscription allows you to search, sort, and save information.

aamc.org/msar

Mission and Interview Questions Worksheet

Medical schools give weight to specific characteristics that align with their missions. Be aware of each school’s mission statement and how your personal traits align with it. Examples could include research inquisitiveness, empathy, teamwork, curiosity, and a desire for knowledge about the health care delivery system. You can find each medical school’s mission statement under the “About” section in the Medical School Admission Requirements website. You don’t need a subscription to view this section. Go to aamc.org/msar, and click on “preview the website for free.”

School name: _____

Factor	Ideal fit	Good fit	No opinion	Unsure	Not a fit	Notes
Course offerings	<input type="checkbox"/>					
Class size	<input type="checkbox"/>					
Location	<input type="checkbox"/>					
Research programs	<input type="checkbox"/>					
Technology	<input type="checkbox"/>					
Interviews and/or meetings with faculty	<input type="checkbox"/>					
Reputation	<input type="checkbox"/>					
Technology	<input type="checkbox"/>					
Tuition and financial aid	<input type="checkbox"/>					
Programs for minority or disadvantaged students	<input type="checkbox"/>					
Teaching methods	<input type="checkbox"/>					
Combined-degree offerings	<input type="checkbox"/>					
Campus tour	<input type="checkbox"/>					
Rural or community offerings	<input type="checkbox"/>					
Residency placement	<input type="checkbox"/>					

Impression of school: Favorable Undecided Unfavorable

Likelihood of applying: Will apply Undecided Unlikely to apply

Follow-up questions to ask: _____

For a list of interview questions, see the article “Selecting a Medical School: 35 Questions I Wish I Had Asked” at aamc.org/35questions.

Summer Health Professions Education Program

The Summer Health Professions Education Program (SHPEP) is a FREE (full tuition, housing, and meals) six-week academic enrichment summer program for qualified undergraduate freshmen and sophomores from:



- Racial and ethnic groups that historically have been underrepresented in health professions—African-American, Hispanic/Latino, and American Indian
- Rural areas, economically disadvantaged areas, or groups that historically have received substandard health care (regardless of racial or ethnic background)

SHPEP offers students a variety of academic and career experiences that will support their preparation within the health professions:

- Academic enrichment in the basic sciences and quantitative topics
- Learning and study skills development, including methods of individual and group learning
- Clinical exposure through small-group clinical rotations and full-group clinician seminars. This is limited to 5 percent of program time for all sites
- Career development sessions, including the exploration of the health professions, admissions process, and an individualized education plan to identify other appropriate enrichment activities

Housing, meal, and travel costs are covered by the program. Scholars are provided with a \$600 stipend, which typically is distributed midway and at the end of the program.

There are many other summer enrichment programs and pipeline and outreach programs for students who are not eligible for SHPEP. Talk with your advisor, check the list of resources on shpep.org, and visit aamc.org/aspiringdocs for more information.

shpep.org



www.facebook.com/shpepconnect

SHPEP is a national program funded by The Robert Wood Johnson Foundation with direction and technical assistance provided by the Association of American Medical Colleges and the American Dental Education Association.

Medical Minority Applicant Registry

The Medical Minority Applicant Registry (MedMAR) is used by U.S. medical schools to identify U.S. applicants who self-identify as members of a racial or ethnic group historically underrepresented in medicine, or who are economically disadvantaged.



When you register for the MCAT exam, you'll get a chance to participate in the Medical Minority Applicant Registry. The registry was created to enhance admissions opportunities for U.S. students who are members of a racial or ethnic group historically underrepresented in medicine, or who are economically disadvantaged. Please see the website for specific eligibility requirements. The registry provides basic biographical information and MCAT exam scores to minority and admissions offices at AAMC-member medical schools, which may choose to send information to students.

aamc.org/medmar

Fee Assistance Program

The AAMC Fee Assistance Program assists those who, without financial assistance, would be unable to take the MCAT exam and/or apply to medical schools that use the AMCAS application.

Fee Assistance Program benefits include reduced registration fees for the MCAT exam, official MCAT preparation materials, complimentary access to the Medical School Admission Requirements website, waiver of AMCAS fees, and more.

Be sure to check the Fee Assistance Program eligibility requirements before you register for the MCAT exam, submit your AMCAS application, or purchase any AAMC products as benefits are not retroactive.

aamc.org/fap

A Pre-Med Student's Steps to Medical School

Getting into Medical School



**College
Freshman
Year**

1

**Explore Your
Options for Careers
in Medicine**

- Visit Aspiring Docs website
- Meet with an advisor
- Attend pre-health meetings
- Apply to summer programs
- Explore financial aid options



This infographic represents a basic timeline of the steps toward medical school. Your advisor and AAMC resources can help you individualize the timeline and steps.





Medical College Admission Test® (MCAT®)

The AAMC develops and administers the MCAT exam—a standardized, multiple-choice test that has been part of the medical school admissions process for more than 85 years.

The MCAT exam is designed to help better prepare tomorrow's doctors for the rapid changes in science and medical education. It reinforces the diversity of interests and preparation that medical school admissions committees look for in their applicants.

The MCAT exam is designed to test not only what you know, but how you apply that knowledge by assessing your problem-solving and critical-thinking skills and knowledge of natural, behavioral, and social science concepts and principles, all of which are necessary to the study and practice of medicine.

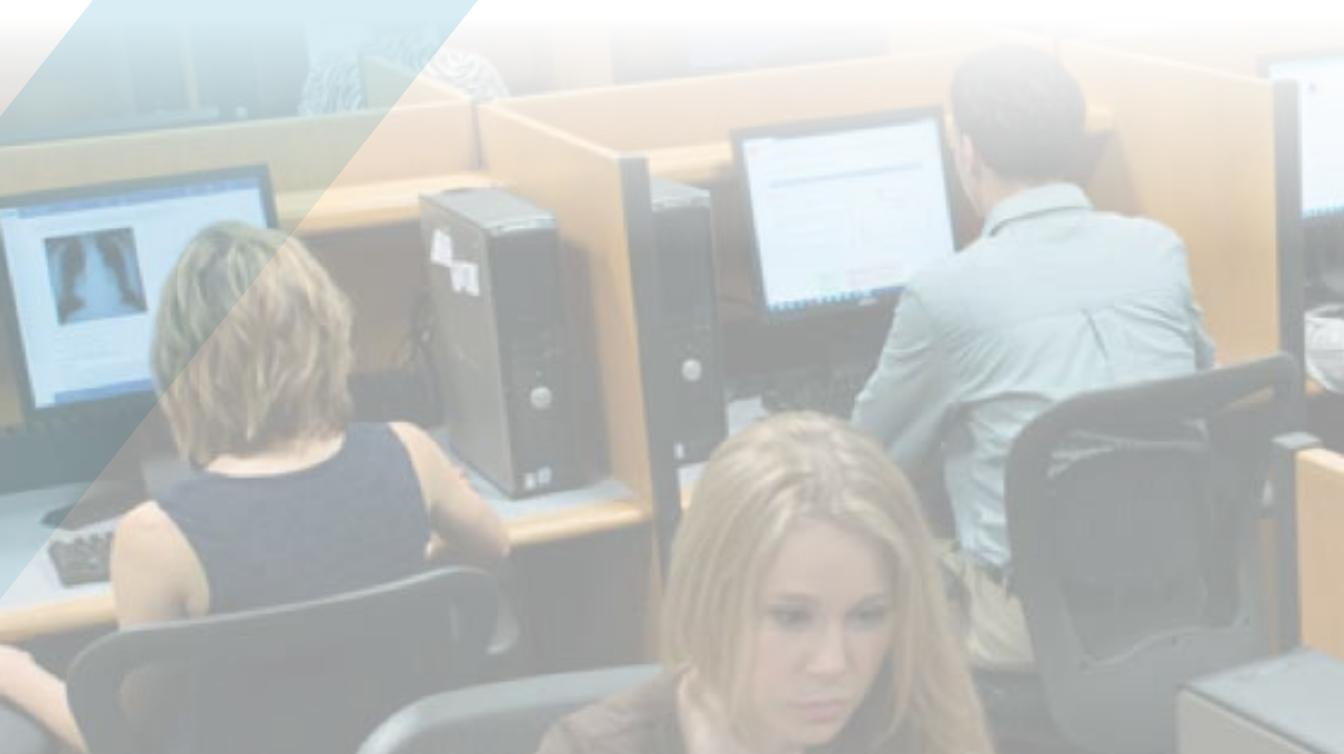
You'll find a variety of resources to help you prepare for the exam, including MCAT practice exams and other materials written by the developers of the exam, video and review questions in the Khan Academy MCAT collection, and more!

To learn more about the MCAT exam, including what's on the exam, test preparation, and scoring, visit aamc.org/mcat.

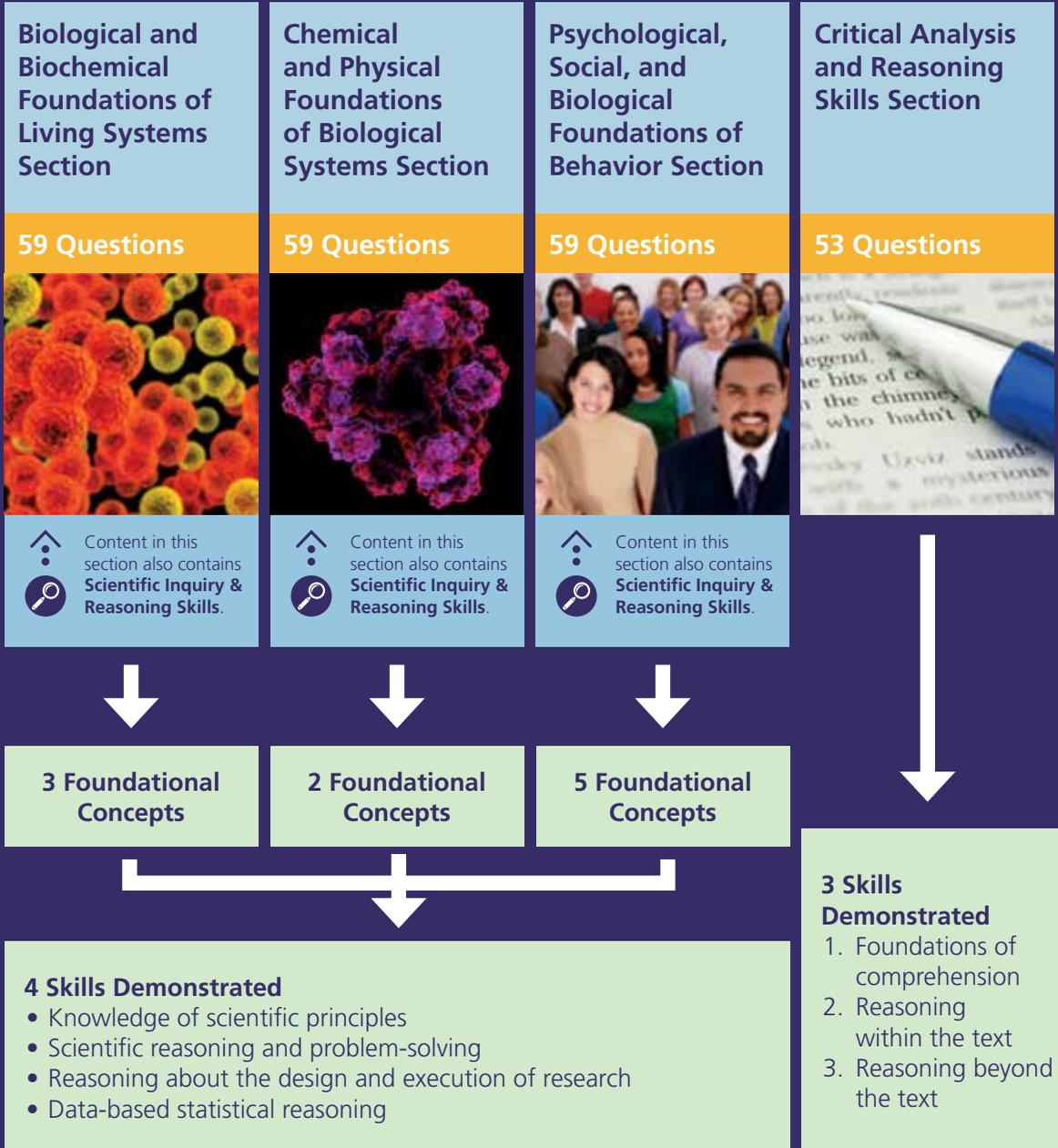
aamc.org/mcat



@AAMC_MCAT



What's on the MCAT Exam?



Get all the details at

students-residents.aamc.org/mcatexam

American Medical College Application Service® (AMCAS®)

Did you know that each pre-med student applies to an average of 16 medical schools?

The best part, however, is that when you use the AAMC's centralized application service, you only need to submit one primary application, regardless of the number of medical schools to which you apply.

AMCAS is available to individuals applying to first-year entering classes at participating U.S. medical schools. If you are applying to an MD or a combined MD program (e.g., MD/PhD), you most likely will use the AMCAS service to complete and submit your application materials. If you are an advanced-standing or transfer applicant, you should contact the medical school directly for assistance.

AMCAS collects and delivers your verified application information, letters of evaluation, and MCAT exam scores to each school you choose. Each participating school is then responsible for making its own individual admissions decisions.

Most medical schools also administer a secondary application and host in-person interviews, which you may be invited to complete. Visit medical school websites for more information about their application and review processes.

Contacting AMCAS

AMCAS representatives are available to answer your questions and assist you in completing your application from Monday through Friday, 9:00 a.m.–7:00 p.m. (ET). Closed Wednesday, 3:00 p.m.–5:00 p.m. (ET)

202.828.0600 | amcas@aamc.org

aamc.org/amcas

 [@amcasinfo](https://twitter.com/amcasinfo)



How Does AMCAS Work?



Application Submitted

Online application completed and submitted to AMCAS

Fees paid (or Fee Assistance Program award used)



Application Processed

All required official transcripts arrive at AMCAS

Verification of coursework and calculation of AMCAS GPAs



Application Delivered

Verified application sent to designated medical schools

Letters delivered as they are received

MCAT scores automatically delivered as they become available

Preparing for AMCAS

- The AMCAS application opens in May of each year for applicants who plan to begin medical school in the following year. When you are ready to begin the application, you should start by visiting the AMCAS website (aamc.org/amcas). The documents and video tutorials available in the Resources section are updated for each application cycle with the most current information.
- AMCAS does not advise applicants on making decisions related to their application, so we encourage you to work with your school's advising office and to review the Medical School Admission Requirements.
- Using the online application, you will enter information about yourself and your background. You will have your official transcripts sent directly to AMCAS, where AMCAS staff will verify your coursework and normalize your GPA based on your school's grading scale. Along with your letters of evaluation, AMCAS then sends your verified application data to the medical schools to which you have chosen to apply.
- For regular applications, your official transcripts must be received by AMCAS within 14 calendar days after the application deadline.
- You can submit your AMCAS application before your official transcripts and letters of evaluation reach AMCAS.
- June-September is the peak application submission period, which means your application may take about six weeks, after all materials are received, to be processed.
- After your application is submitted, you may check its verification status using our automated system or on Twitter @amcasinfo.

View FAQs, video tutorials, download an instruction manual, and more at

aamc.org/amcas

Financial Information, Resources, Services, and Tools (FIRST)

Most medical students borrow at least a portion of the money they need to finance their education, and there are many options to repay.

Financial Information, Resources, Services, and Tools (FIRST) is the AAMC's financial aid and debt management program—and it's packed with FREE materials to help you make wise financial decisions. You will find:

- A library of financial aid fact sheets to help you with budgeting, understanding credit cards, debt management, and more
- Videos that provide answers to many financial aid-related questions
- The MedLoans® Organizer and Calculator—a tool specifically designed for medical students at AAMC-member medical schools
- Free access to SALT™, an online program that provides practical information and interactive lessons on money management, budgeting, credit, and more

With FIRST, you will find the information you need to make educated borrowing decisions and develop sound debt management skills.

aamc.org/first



You CAN Afford Medical School

You want to be a doctor or physician scientist—that’s a good career choice, both socially and financially. You probably know that medical school is expensive, but what you may not know is once you are admitted to medical school there are options for financing your education. The key is to find the solution that best meets your goals.

Things to Think About

There are many different ways you might choose to pay for your education, but student loans are a reality for most students. The keys to successful repayment are careful planning and budgeting, learning how to effectively manage your debt, and educating yourself on the various repayment options.

Have a Plan

One of your first stops on the road to creating a sound financial plan is AAMC’s FIRST program. FIRST provides extensive information on the cost of applying to medical school, various types of loans, repayment information, and other related topics. Even with these resources, the process of financing medical school may be a bit overwhelming at times. Your next step is identifying a financial aid advisor to assist you.

Get Good Advice

The importance of getting sound, accurate, and timely advice cannot be overstated. Whether it’s your pre-health advisor, a current medical student or resident, or the admissions or financial aid officer where you are applying, there are people who can help you navigate this often complex process. Look at each school’s financial aid office website to see what information is available. Bring your financial aid questions with you when you visit and on interviews, and stop by the financial aid office to get your questions answered.

Learn About Repayment Options

It may seem too early to learn about loan repayment options, but being aware of them can help ease the fear of student loan repayment down the road. There are various repayment plans currently available, and it’s important to know that you have options when it comes to selecting the plan that works best for your financial situation. Another opportunity for repayment can be found with service repayment programs. These programs can help you repay your loans while practicing in a medically underserved area, or through public or military service. For more information, review the financial aid fact sheets at www.aamc.org/first/factsheets.

Final Thoughts

Stay true to your passion. Explore your options. Find a good advisor/mentor. If you can, enter medical school with little or no credit card debt and be aware of the status of your undergraduate loans. The less debt you begin school with, the less debt you will have at the end. Do what you can to not put application and interviewing costs (fees, travel, hotels, etc.) on credit cards. Frankly, there will be no room in your medical school budget to pay off that debt. Lastly, remember the financial aid office; they will be essential to you throughout medical school. They are there to help, so make sure you get the help you need.

aamc.org/first

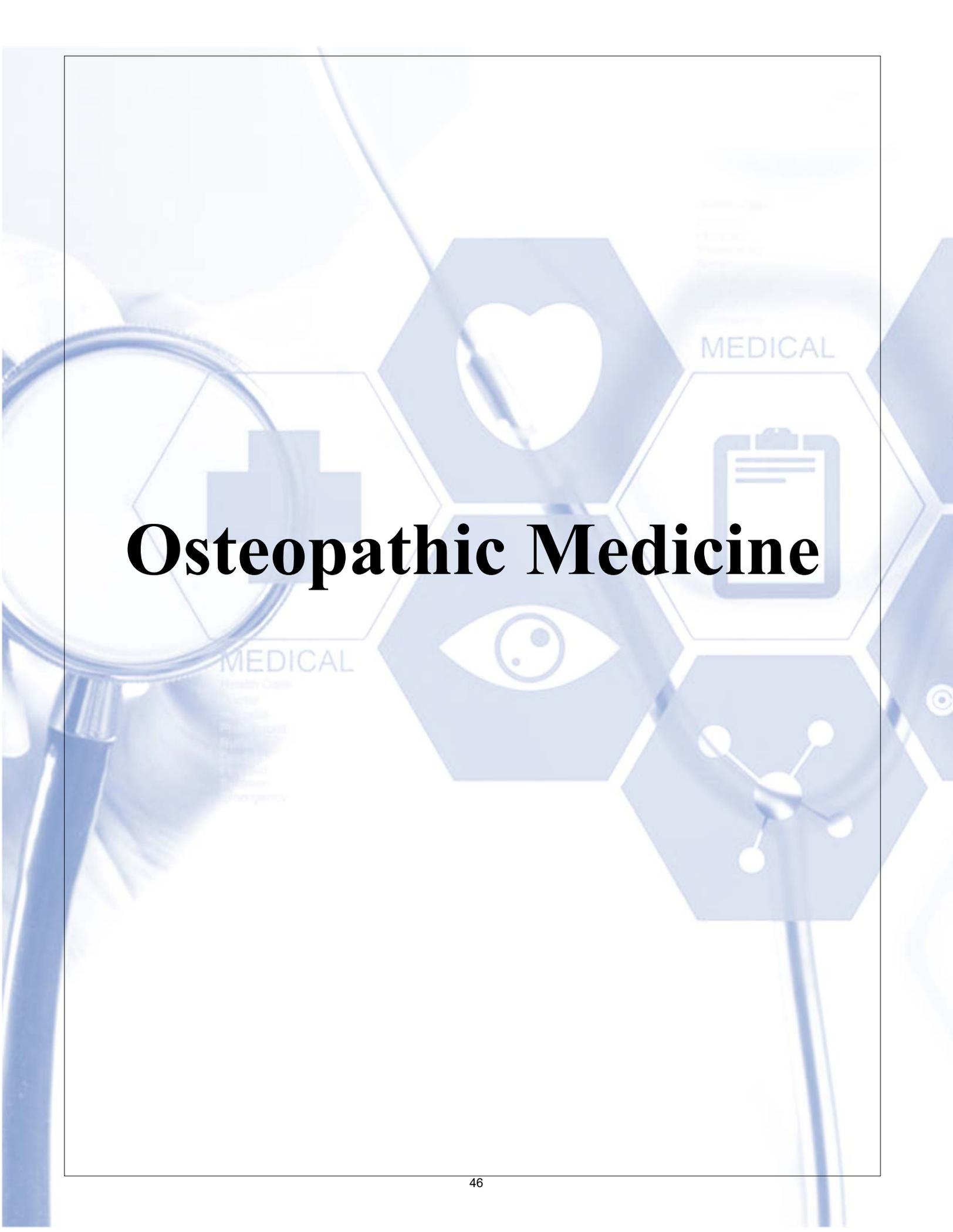
My Path to Medical School

	✓	Date
College Year 1	Talk with academic advisor about selecting fall semester courses	
	Appointment with a pre-health advisor	
	Add pre-health meetings to my calendar and get on email lists	
	Find opportunities to volunteer, shadow a doc, etc.	
	Explore options for careers in medicine on Aspiring Docs website	
	Apply to summer enrichment programs (if eligible)	
	Explore premedical coursework requirements and application policies in MSAR Online	
	Learn about financial aid and financing strategies through FIRST's website (aamc.org/first)	
Summer	Volunteer/work in medical field; internship, research, leadership	
	Participate in summer enrichment programs	
	Take summer courses as necessary or desired	
College Year 2	Check in with pre-health advisor	
	Add pre-health meetings to my calendar and double-check that I'm getting emails	
	Volunteer/work in medically related activities	
	Develop relationships with faculty, advisors, and mentors on campus (important for getting letters of recommendation later)	
	Apply for summer research/enrichment programs (if eligible)	
Summer	Volunteer/work in medical field; internship, research, leadership	
	Participate in summer enrichment programs	
	Take summer courses as necessary or desired	
	Check out the AMCAS website resources and review the process of applying (aamc.org/amcas)	
	Look at the process of applying and preparing for the MCAT® exam (aamc.org/mcat)	
	Look at the Fee Assistance Program (aamc.org/fap) eligibility requirements	
College Year 3	Pursue leadership opportunities in pre-health organizations on campus	
	Consider which faculty, advisors, and mentors to approach for letters of recommendation	
	Continue with volunteer/work in meaningful clinical experiences, and possibly take on a more substantial role	
	Meet with pre-health advisor to: Strategize my medical school application timeline, whether I want to take a gap year; discuss letters of recommendation; review medical education options; and discuss my schedule for completing premedical and other required coursework	
	Register for a spring date for the MCAT exam (if not taking a gap year)	
	Explore premedical coursework requirements and application policies in MSAR Online	
	Learn about financial aid and financing strategies through FIRST's website (aamc.org/first)	
Summer	Continue with volunteer/work in meaningful clinical experiences, research, and leadership experiences	
	Complete AMCAS application; work on secondary applications	
	Request letters of recommendation from faculty, advisors, mentors	
College Year 4	Continue with volunteer/work in meaningful clinical/research experiences	
	Consult with pre-health advisor on application status, medical education options, etc.	
	Complete supplementary application materials for schools I've applied to	
	Prepare for interviews and campus visits at medical schools	
	Receive acceptances and make a decision on which medical school to choose	
	Notify the medical schools I will not be attending by the deadline date given	
	Complete FAFSA and financial aid forms	
Summer	Purchase books and equipment, and make my living arrangements	
	Attend orientation programs and matriculate into medical school	



**Association of
American Medical Colleges**

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www.aamc.org

The background is a light blue collage of medical-related elements. It includes a magnifying glass on the left, a stethoscope at the bottom, and several hexagonal icons: a heart, a clipboard, an eye with a yin-yang symbol, and a molecular structure. The word "MEDICAL" is repeated in a sans-serif font in several locations. The central text "Osteopathic Medicine" is in a large, bold, black serif font.

Osteopathic Medicine

General Description:

Doctors of Osteopathic Medicine (DOs) are fully-licensed, complete physicians who practice in every medical specialty in all 50 states. The osteopathic medical philosophy emphasizes patient-centered, holistic care with a focus on preventative medicine. DOs are trained to first consider the person within the patient. They practice according to the latest science and use the latest technology, while also considering options to complement pharmaceuticals and surgery. Emphasizing a whole-person approach to treatment and care, DOs are trained to listen and partner with their patients to help them get healthy and stay well.

What are 3-5 personal characteristics important for happiness and success in your profession?

- **Listening skills.** DOs are trained in the art of listening and communicating with their patients, giving them a deep understanding of how lifestyle and environmental factors can influence wellbeing.
- **Self-awareness.** Osteopathic physicians should take time to figure out what makes them happy. This will guide them toward a path of success and help determine how they can best make a difference for their patients.
- **Acceptance.** While the goal is optimal health, life is a process and each appointment is not an endpoint.

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- “What do I want my life to look like when I graduate?”
- “Where do I picture myself in 20 years?”
- “What is my philosophy -- am I focused on health care or health?”

Preparing for Admission:

- **Academics:** [General Admissions Requirements](#)
- **Standardized Tests:** All schools require official MCAT scores. Learn more <https://students-residents.aamc.org/applying-medical-school/taking-mcat-exam/>
- **Experience/Exposure:** Check listings in the [College Information Book](#) for each school.
- **Letters of Recommendation:** Requirements vary by college. Check listings in the [College Information Book](#) for each school.
- **Resources for researching schools:** [College Information Book](#)

The Admissions Cycle:

- CAS(es): AACOMAS
 - Application URL: aacomas.liaisoncas.com/
 - Application opens: First week in May
 - Application can be submitted: First week in May
 - Colleges begin reviewing applications: Third week in June

NAAHP Fact Sheet for Health Professions Advisors

Osteopathic Medicine

- Application deadlines: Deadlines vary by college and range from December through April. The application cycle officially closes in April of each year.
- Number of schools participating: As of January 2018, there were 34 colleges of osteopathic medicine delivering instructions at 49 locations in 32 states (colleges, branch campuses and additional locations). All accredited U.S. colleges of osteopathic medicine participate in AACOMAS except the University of North Texas Health Sciences Center College of Osteopathic Medicine.
- Fees, fee waivers:
 - Application fee: The fee for submitting the first application is \$195. Each additional application is \$45.
 - Fee waivers: A limited number of fee waivers are available through the AACOMAS Fee Assistance Program and are worth \$195 each (covers the initial application fee). Eligibility requirements and instructions on how to apply for a fee waiver application are available in the [AACOMAS instructions](#).
- Letters of Rec logistics: All AACOMAS programs accept letters of recommendation directly through the AACOMAS application. Letter requirements vary by college and some colleges may allow letters to be submitted through alternate services. For these reasons, applicants must review the processes outlined by each college in the [College Information Book](#).
- Standardized test logistics: Official MCAT scores must be sent directly to AACOMAS using the online [MCAT Score Reporting System](#). Releasing MCAT scores to AACOMAS is a 2-step process:
 1. In the "Standardized Tests" section of the AACOMAS application, applicants must enter their AAMC ID# (assigned upon taking the MCAT exam). The applicant's name, date of birth, and AAMC ID# on their AACOMAS application must match exactly the information on their MCAT exam.
 2. Release MCAT scores to AACOMAS electronically from AAMC using the online [MCAT Score Reporting System](#). It takes approximately 10-12 days to process official MCAT scores once they are released to AACOMAS from AAMC. If the applicant's name or date of birth appears differently on their MCAT than it does on AACOMAS, their scores will not post automatically to their account.More information about submitting official MCAT scores is available in the online [AACOMAS instructions](#).
- Transcripts: U.S. and English Canadian official transcripts may be sent directly to AACOMAS. Instructions on sending official transcripts varies based on the source of the transcript, so applicants must review the [AACOMAS online instructions](#) carefully. The AACOMAS mailing address is:

AACOMAS Transcript Processing Center
P.O. Box 9137
Watertown, MA 02471

- AACOMAS Instructions and FAQs:
<http://help.unicas.com:8888/aacomashelppages/instructions/index.html>
- Contact information for applicants: 617-612-2889 / aacomasinfo@liaisoncas.com
- CAS contact for advisors: 716-636-7777 option 7 / webadmitsupport@liaison-intl.com

The Admissions Process:

- Approx dates of interviews, offers: Interviews can begin as early as mid-August and conclude as late as March.

NAAHP Fact Sheet for Health Professions Advisors

Osteopathic Medicine

- Advisor portal: Universal Advisor Portal: uap.webadmit.org/
- Total number of applicants in 2016-17 (through CAS and/or all member programs if known): 20,836 individual applicants
- Total number of first year students (through CAS and all if known): 8,113 total first-year enrollment in Fall 2017
- Test score and GPA averages and ranges, other data on applicants and accepted students (major, age, race/ethnicity, gender, whatever makes sense for the profession) can be found in the [AACOMAS Applicant Pool Summary Report, Entering Class 2017](#).
- Total number of students: Total enrollment at colleges of osteopathic medicine in Fall 2017 was 28,981 – over 20% of all current US medical students.
- Average # of applications per student: 8.8 average applications per applicant

Learn More about the Profession

Training & Career Opportunities

- Number of years: Osteopathic physicians complete four years of medical school, followed by 3-8 years of internships, residencies, and fellowships (required for certain specialties).
- Degree attained: Doctor of Osteopathic Medicine (DO)
- Total number of graduates: 6,038 (As of June 2017)
- Data on employment of recent graduates, if available: GME placement information can be found in the [Report on Osteopathic Medicine Placements in 2017 Matches](#).

Key Resources for Students

- A [Recruitment Events Calendar](#) is available for Advisors and their students to view Open Houses and related admissions events

Key Resources for Advisors

- Universal Advisor Portal: uap.webadmit.org/
- AACOM Advisor Resources: www.aacom.org/become-a-doctor/pre-health-advisors
- AACOMAS Instructions & FAQs: help.unicas.com:8888/aacomashelpPages/instructions/index.html
- American Osteopathic Association: www.osteopathic.org/
- Doctors that DO: doctorsthatdo.org/

Social Media

- AACOMAS on Facebook: www.facebook.com/AACOMAS/
- AACOMAS on Twitter: twitter.com/AACOMASPreMed
- AACOM on Instagram: www.instagram.com/aacom_do/
- AACOM on Facebook: www.facebook.com/AmericanAssociationCollegesOsteopathicMedicine/
- Pre-SOMA on Facebook: www.facebook.com/pre.soma

NAAHP Fact Sheet for Health Professions Advisors

Osteopathic Medicine

Advisory Council Professional Association Partner Information

- **The American Association of Colleges of Osteopathic Medicine:** <http://www.aacom.org>
- **Mission**
The American Association of Colleges of Osteopathic Medicine (AACOM) provides leadership for the osteopathic medical education community by promoting excellence in medical education, research and service, and by fostering innovation and quality across the continuum of osteopathic medical education to improve the health of the American public.
- **Size of organization, number of member institutions:**
AACOM represents the 34 accredited colleges of osteopathic medicine in the United States. These colleges are accredited to deliver instruction at 49 teaching locations in 32 states. In the current academic year, these colleges are educating nearly 29,000 future physicians—more than 20 percent of all U.S. medical students. Six of the colleges are public and 28 are private institutions. The Association, guided by its Board of Deans, Assembly of Presidents, and various other councils and committees, is actively involved in all areas of osteopathic medical education.
- **New institutional members in last two years:**
 - Idaho College of Osteopathic Medicine
 - Arkansas College of Osteopathic Medicine
 - University of the Incarnate Word School of Osteopathic Medicine
 - Kansas City University College of Medicine and Biosciences - Joplin
 - Rocky Vista University College of Osteopathic Medicine - Utah Campus
 - Burrell College of Osteopathic Medicine at New Mexico State University
 - NYIT College of Osteopathic Medicine at Arkansas State University

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Date updated: 2/5/18

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.

PHYSICIAN (D.O.)

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Osteopathic physicians, known as D.O.s, use all the tools and technology available to modern medicine with the added benefits of a holistic philosophy and a system of hands-on diagnosis and treatment known as osteopathic manipulative medicine. This modality can be used to relieve discomfort or musculoskeletal abnormality associated with a number of disorders including: asthma, sinus disorder, carpal tunnel, migraines, and menstrual pain. Osteopathic medicine's goal is to promote the body's innate ability to heal itself. The D.O. philosophy considers the impact of lifestyle and community on an individual's health and to treat the patients as a whole, instead of treating an ailment or disease. Osteopathic medicine is growing with 74,000 active D.O.s currently in the U.S., and 20% of U.S. medical students are attending an osteopathic medical school. D.O.s are licensed to practice the full scope of medicine in the United States (as well as more than 65 countries abroad). D.O.s can choose any specialty, prescribe drugs, perform surgeries, and practice medicine. Though earnings vary according to number of years in practice, type of practice, geographical location, and specialty, the average annual income of physicians can range from \$140,000 - \$300,000. Employment of physicians and surgeons will grow faster than average for all occupations through 2022 as a result of current doctor's retiring, the continued expansion of the healthcare industries, and an aging population.

MEDICAL SCHOOL

There are currently 33 accredited colleges of osteopathic medicine offering instruction at 44 locations in 29 states. Six of the colleges are publically controlled, and 27 are private institution. Osteopathic medical school usually requires four academic years. The first two years of osteopathic medical school are geared toward the basic sciences, learning a core set of clinical examination skills, and courses that cover the various systems of the body. The last two years involve a series of clinical rotations throughout inpatient and outpatient settings where students work with patients under the supervision of attending physicians and medical residents. Throughout the four years of training osteopathic principles and techniques are integrated into the curriculum and rotations as additional resources for diagnosis and treatment of disease. During the last year of medical school, students make decisions about medical specialty and apply for internship or residency programs in their desired area of expertise.

RESIDENCY AND FELLOWSHIP TRAINING

Following medical school, graduates begin their graduate medical education or residency, which is paid on-the-job training, in a specialty. The years of training required are between 3 and 7, depending on the specialty that is selected. Due to the Osteopathic philosophy, the majority of D.O.'s choose residencies in Family Practice, Pediatrics, and Internal Medicine (which requires 3 years of training). Training in Obstetrics and Gynecology, Pathology, Anesthesiology, Dermatology, Neurology, Nuclear Medicine, Ophthalmology, Physical Medicine, Psychiatry, Radiology and Radiation Oncology is four years. The surgical specialties including General, Neurological, Orthopedic, Otolaryngology, and Urology require five years of residency. Most specialties also offer advanced training in a subspecialty usually requiring an additional one to two years of fellowship following residency. D.O. graduates may apply to osteopathic and allopathic residency programs.

PRE-MEDICAL PREPARATION

Due to the competitive nature of the medical school application process and rigorous training required, students should carefully consider their motivation and preparation for a career in medicine. Osteopathic medical schools are looking for an academic record that indicates the aptitude and knowledge base needed to successfully complete the medical school curriculum. In 2016, a total of 20,720 applicants applied to osteopathic medical schools for 6,592 seats. The entering class of 2016 had a mean science GPA of 3.45, a mean non-science GPA of 3.61 and a mean overall GPA of 3.55. The average MCAT score was 499.32. The class was 43% female, 57% male, and the median age was 24.

Any major is appropriate for osteopathic medical school preparation. While a science major requires many of the same basic pre-requisites, it is not required for admission to any medical school. Students are advised to select a major they find interesting and to work at developing a broad-based, interdisciplinary foundation of knowledge and skills from which they can build upon.

COURSE REQUIREMENTS

Specific undergraduate course requirements vary from program to program. Requirements that differ from those listed below can be found in school catalogs or in the [Osteopathic Medical College Information Book](#) which is available for free online or in the HPAO Resource Library.

CSULB courses which fulfill admission requirements for most U.S. Osteopathic programs:

Students maintain responsibility for verifying course selection with individual programs. This is NOT a comprehensive list of prerequisites for all Osteopathic programs.

Coursework	CSULB Courses	Units
One year of General Chemistry with lab	Chemistry 111A & 111B	5, 5
One year of Organic Chemistry with lab	Chemistry 220A & 220B + 320L (Chemistry. & Biochemistry. majors) OR 220A w/ 223A & 220B w/ 223B (Biology & other majors)	4, 4
One year of General Biology with lab	Biology 211 & 212 & 213	4, 4
One year of General Physics with lab	Physics 100A & 100B OR 151 & 152	4, 4
One semester to 1 year of Calculus (check with the school)	Math 119A & 119B OR 122 & 123	3 - 4
One year of English (Composition and Literature preferred)	English 100 AND another course from the English department such as: 102, 180, 300	3, 3

ADDITIONAL RESOURCES

- [Medical College Admission Test \(MCAT\)](#)
- [American Association of Colleges of Osteopathic Medicine \(AACOM\)](#)

For more information on Osteopathic Medicine, visit www.aacom.org and see your HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events.

MD and DO Programs

MD and DO programs are similar in some ways and different in others. Speak to your prehealth advisor to decide which programs might be right for you.

Similarities



The Medical College Admission Test® (MCAT®) is used in the admission process.



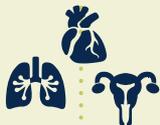
Students matriculate after completing an undergraduate degree.



Programs typically are four years.



MD and DO degrees are followed by three to seven years of residency.



Graduates can practice any specialty.



Physicians are fully certified after passing board exams.

Just MD

- Most applicants apply through the American Medical College Application Service® (AMCAS®).
- 152 MD-granting schools in the United States and 17 in Canada.
- Students take the USMLE licensing exams.

Just DO

- Applicants apply through the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS).
- 34 DO-granting schools in the United States.
- Students take the COMLEX licensing exams.
- Additional training in the musculoskeletal system and Osteopathic Manipulative Treatment (OMT).

The background is a light blue collage of medical-related elements. It features a grid of hexagons, some containing icons like a heart, an eye, a clipboard, and a molecular structure. A magnifying glass is visible on the left side, and a stethoscope is at the bottom. The word 'MEDICAL' appears in several places in a light blue font. The central text 'Podiatric Medicine' is in a large, bold, black serif font.

Podiatric Medicine



General Description

A Doctor of Podiatric Medicine (DPM), known also as a podiatric physician or surgeon, is qualified by their education and training to diagnose and treat conditions affecting the foot, ankle and related structures of the leg. When treating patients, this system is also known as the lower extremity. Podiatric physicians are uniquely qualified among medical professionals to treat the lower extremity based on their education, training and expertise. Podiatrists are defined as physicians by the federal government.

What are some common daily activities/experiences?

- Treat diabetic patients, children, athletes, and the elderly.
- Prescribe medication designed to treat specific foot and ankle ailments.
- Perform complex surgery and simple outpatient procedure such as excising a toenail.
- Imaging a broken bone using the latest radiological instruments.
- Conduct research or collecting data for clinical trials.
- Teaching/training residents or students rotating in clerkships.

What are 3-5 personal characteristics important for happiness and success in your profession?

- Attention to detail
- Compassionate
- Work Ethic
- Good listener
- Life-long learner

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- Have I shadowed a podiatric physician yet, so that I can best learn about the profession?
- What is the main reason I am considering a career in podiatric medicine?
- Is there a specific area of podiatry I want to specialize in (i.e. diabetic care, wound care, sports medicine) and how do I go about doing that?

Preparing for Admission:

- **Academics:** Successful candidates who apply for entry into one of the nine colleges of podiatric medicine display positive characteristics of mature adults. Evidence of preparation for a career in medicine, and specifically a career in podiatric medicine, should also be present in each application. Candidates with strong science preparation are preferred. Advisors can review academic qualifications by viewing our [Prerequisite Chart](#) of required and recommended courses. Attributes of successful candidates also include good time management, problem solving proficiency and a strong sense of inter- and intrapersonal communication skills. Successful candidates also have a demonstrable record of community service or good works, and are accomplished individuals. Background in research or a desire to conduct research is also desirable.
- **Standardized Tests:** All applicants are required to submit an official MCAT score via AACPMAS. All standardized admissions exams taken more than three (3) years prior to application are not acceptable.
- **Experience/Exposure:** Most Schools and Colleges require applicants shadow a DPM prior to applying or being granted admissions. The AACPM is proud to be a partner in the effort to create shadowing opportunities for undergraduate students interested in obtaining insight in the practice of a podiatric

NAAHP Fact Sheet for Health Professions Advisors

Podiatric Medicine

physician. Our [DPM Mentors Network](#) is a robust matching service, designed to place students with talented DPMs near where they live or go to school.

- **Letters of Recommendation:** Each School or College of Podiatric Medicine determines its preference for the type and number of letters of recommendation. Additionally, each college provides instructions for either electronic or paper delivery of letters. Details can be found in our 2017-2018 version of the [Podiatric College Information Book](#).
- **Resources for researching schools**
 - Member school links: Our nine schools and colleges of Podiatric Medicine are conveniently linked on our webpage, [Accredited U.S. Colleges of Podiatric Medicine](#), for easy access.
 - [Podiatric College Information Book](#): This reference guide, published biannually in even years, provides prospective students with an overview of the breadth and depth to a career in podiatric medicine and specific information about admission requirements for each of the colleges and schools of podiatric medicine in the U.S. recognized by the Council on Podiatric Medical Education (CPME). Complimentary printed copies are available to advisors and interested students upon request. School specific data is updated in the odd years and posted to our web site.

The Admissions Cycle:

- CAS Information: portal.aacpmas.org
 - Application opens: first Wednesday in August each year: August 1, 2018 and August 7, 2019.
 - Application can be submitted: As soon as AACPMAS opens in August.
 - Priority Deadline: April 1, 2018
 - Application service closes: June 30, 2018
 - Number of schools participating: 9 out of 9 accredited programs
 - Fees, fee waivers: The initial application to AACPMAS is \$180. There is an additional \$60 fee for each additional submission. The AACPM does not offer any fee waivers.
 - Letters of Rec: Each School or College of Podiatric Medicine determines its preference for the type and number of letters of recommendation. Additionally, each college provides instructions for either electronic or paper delivery of letters. Details can be found in our 2017-2018 version of the [Podiatric College Information Book](#).
 - Standardized test logistics: Official MCAT scores must be submitted directly to AACPMAS for verification.
 - Transcripts: All official transcripts must be sent to **AACPMAS Transcript Verification Department, P.O. Box 9200, Watertown, MA 02471** for verification. Students may be asked to submit an official set of transcripts prior to matriculating.
 - Instruction manual and FAQ: Instructions and FAQs for the current AACPMAS cycle can be found by navigating here: help.unicas.com:8888/aacpmasHelpPages/instructions/index.html
 - Contact information for students and advisors:
Phone Number: 617-612-2900 (if in the U.S.)
Email: aacpmasinfo@aacpmas.org (When contacting via email, please include your full name, AACPMAS ID number and detailed question.)
Mail: AACPMAS, P.O. Box 9200, Watertown, MA 02471

The Admissions Process:

- Approximate dates of interviews, offers: The Schools and Colleges of Podiatric Medicine adhere to the established [Traffic Rules](#), which establishes which applicants are eligible to be invited for an interview, when offers of acceptance can be disseminated and how deposits can be collected.

NAAHP Fact Sheet for Health Professions Advisors Podiatric Medicine

- Advisor portal: Advisors are now able to view the list of designated DPM programs for their students in the previous cycle and the final admission decision submitted by each program via AACPMAS Advisor Portal. Data on students (who have designated your institution as the “primary” college attended and authorized AACPMAS to release their information) from the 2014-2015, 2015-2016 and 2016-2017 cycles are currently available.
- Total number of applicants in most recent cycle: 868
- Average # of applications per student: 4.57
- Total number of first year students: 633
- Test score and GPA averages and ranges, other data on applicants and accepted students: Women made up 351 (40%) of the applicants and 239 (39%) of matriculating students in 2017. About 97% of the students who enter a college of podiatric medicine have a bachelor’s degree. Of those having earned a degree, most will have studied a life or natural science; however, non-science majors are very successful podiatric medical students. A growing number of candidates have also completed some graduate study. For 2017 matriculating students into the first year of study at a school or college of podiatric medicine the average GPA was 3.29, the average science GPA was 3.11 and the average non-science GPA was 3.47.
- Total number of students: 2325

Learn More about the Profession

Training & Career Opportunities:

- Number of years: Four (4)
- Degree attained: DPM, Doctor of Podiatric Medicine
- Total number of graduates in most recent academic year: 586
- Data on employment of recent graduates, if available: After completing four years of podiatric medical studies, podiatric physicians apply for a comprehensive three-year Podiatric Medicine and Surgery Residency (PMSR). Residency training provides a combination of medical and surgical experiences that are resource-based, competency driven and assessment validated.

Key Resources for Students:

- The AACPMC’s [Student Brochure](#) is the primary piece of literature that is disseminated by the organization. This handy guide gives prospective students and advisors alike all of the basic information about education and careers in podiatric medicine, as well as a cover featuring a series of interesting facts about the foot and podiatry as a whole.

Key Resources for Advisors:

- [Podiatric Internship Program Information](#)
- [DPM Mentors Network](#)
- [Student Brochure](#)
- [College Information Booklet](#)
- Complimentary copies are available to advisors upon request. Email podinfo@aacpm.org to request materials.

Social Media:

- Facebook: [facebook.com/aacpm](https://www.facebook.com/aacpm)
- Twitter: [@PodMedColleges](https://twitter.com/PodMedColleges)
- Instagram: [@PodMedColleges](https://www.instagram.com/PodMedColleges)

NAAHP Fact Sheet for Health Professions Advisors

Podiatric Medicine

Advisory Council Professional Association Partner Information

The Mission of the **American Association of Colleges of Podiatric Medicine (AACPM)** is to serve as the leader in facilitating and promoting excellence in podiatric medical education leading to the delivery of the highest quality lower extremity healthcare to the public.

- **Size of organization, Number of member institutions:** There are nine (9) member college institutions and 203 teaching hospital institutions.
- **New institutional members in last two years:** none

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NAAHP liaison and contact information

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Date updated: June 2018

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.

PODIATRIC MEDICINE (D.P.M.)

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Doctors of Podiatric Medicine (DPM), also known as Podiatrists, are podiatric physicians or surgeons who diagnose and treat conditions affecting the foot, ankle, and related structures of the leg. Podiatrists are specialized to prevent, diagnose, and treat ailments of the foot including disorders, diseases, and injuries. DPMs are defined as physicians by the federal government and make independent judgments, diagnose, perform surgery, administer medications, and prescribe physical therapy regimens. Practitioners can focus on a particular area of podiatric medicine such as surgery, sports medicine, biomechanics, geriatrics, pediatrics, orthopedics, and primary care. DPMs often detect serious health problems because a number of diseases manifest first through symptoms of the lower extremities (i.e., diabetes, arthritis, heart disease, or kidney disease). The demands for the skills of Podiatrists are increasing as disorders of the foot and ankle are among the most widespread and overlooked health problems.

Students interested in pursuing a DPM should consider a number of factors including the lifestyle offered by a career in podiatric medicine. Because there is a demand for podiatrists that exceeds the supply, the earnings of a podiatrist are high. In addition to desirable salaries, a podiatrist can also enjoy a flexible lifestyle. When comparing to other medical specialties, podiatry offers more options in practice structure. Those who seek a fast-paced, engaging atmosphere in a hospital emergency room and those looking for a more relaxed, family-friendly schedule can both thrive in the field of podiatry.

There are an estimated 15,000 podiatrists practicing in the U.S. (Board of Podiatric Medicine). Though earnings vary according to number of years in practice, type of practice, geographical location, and specialty, podiatrists enjoy very high earnings. Podiatrists earned a median net income of \$134,414. Podiatrists in partnerships tended to earn more than their colleagues in solo practice. Employment of podiatrists is expected to increase by 23 % from 2012 to 2022, much faster than the average for all occupations. Because of the rising number of injuries sustained by a more active and increasingly older population, those who are severely overweight, and Americans who are diagnosed with diabetes, more people will turn to podiatrists creating an increase in demand for podiatrists.

PODIATRIC MEDICAL EDUCATION

There are nine colleges of podiatric medicine in the United States (2 in CA) that are accredited by the Council on Podiatric Medical Education. All of the colleges grant the degree of Doctor of Podiatric Medicine (DPM). DPMs receive medical education and training comparable to medical doctors, which usually require four years of graduate coursework. The first two years are devoted largely to classroom instruction and laboratory work in the basic medical sciences, such as anatomy, physiology, microbiology, biochemistry, pharmacology, and pathology. During the third and fourth years, students concentrate on courses in clinical sciences, gaining experience in the college clinics, community clinics, and accredited hospitals. Clinical courses include but are not limited to general diagnosis, dermatology, general medicine, podiatric surgery, trauma, and biomechanics. After four years of study and receiving the DPM degree, doctors can begin a postdoctoral residency program to further strengthen and refine the practitioner's area of specialty.

Residency programs usually last two or more years and are based in accredited hospitals. Practitioners can focus on many different specialty areas within the field of podiatry, including surgery, sports medicine, biomechanics, geriatrics, pediatrics, orthopedics, or primary care.

ACADEMIC PREPARATION

Most first-year students entering the colleges of podiatric medicine possess baccalaureate degrees and about 10% have advanced degrees. Potential podiatric medical students may be evaluated on the basis of their grade point average (GPA), performance on the MCAT extracurricular and community activities, personal interview, professional potential, etc. Due to the competitive nature of the podiatric medical school application process and rigorous training required, students should *carefully consider their motivation and preparation for a career in podiatric medicine*. Women made up 467 (39%) of the applicants and 275 (41%) of matriculating students in 2015. For 2015 matriculating students into the first year of study at a school or college of podiatric medicine the average GPA was **3.39**, the average science GPA was 3.26 and the average non-science GPA was **3.61**. The average MCAT score was a 21.2.

Any major is appropriate for podiatric medical school preparation. While a natural science major requires many of the same basic pre-requisites, selecting a natural science major is not required for admission to any podiatric medical school. Students are advised to select a major they find interesting and to work at developing a broad-based, interdisciplinary foundation of knowledge and skills from which they can build upon.

COURSE REQUIREMENTS

CSULB courses which fulfill admission requirements for most U.S. programs:

Students maintain responsibility for verifying course selection with individual programs.

Coursework	CSULB Courses
One year of General Chemistry with Lab	Chemistry 111A & 111B
One year of Organic Chemistry with Lab	Chemistry 220A & 220B + 320L (Chem./Biochem. majors) OR 220A w/ 223A & 220B w/ 223B (Biology and other majors)
One year of General Biology with Lab	Biology 211 & 212 & 213
One year of General Physics with Lab	Physics 100A & 100B OR 151 & 152 & 254
One (or more) course in Biochemistry (MCAT)	Chemistry 441A and/or 441B or 448
Microbiology	Biology 311
One semester to one year of Calculus	Math 119A OR 122 & 123
One year of English	English 100 AND another course from the English department such as: 102, 180, 300
Social and Behavioral Sciences (MCAT)	Sociology 100 and Psychology 100 (MCAT 2015)

ADDITIONAL RESOURCES

- [American Podiatric Medical Association \(APMA\)](#)
- [American Association of Colleges of Podiatric Medicine \(AACPM\)](#)
 - [AACPMC: Student Brochure \(pdf\)](#)
- [The Nine Colleges of Podiatric Medicine](#)

See your HPAO advisor for more information on Podiatric Medicine, the application process and a list of upcoming workshops and events.



PODIATRIC MEDICAL COLLEGE INFORMATION BOOK

FOR FALL
**2019
2020**
ENTERING CLASSES



**AMERICAN ASSOCIATION OF
COLLEGES OF PODIATRIC MEDICINE**
15850 Crabbs Branch Way, Suite 320
Rockville, MD 20855
301-948-0957
www.aacpm.org
www.DiscoverPodiatricMedicine.org

CHECK US OUT!

- [Facebook.com/AACPM](https://www.facebook.com/AACPM)
- [@PodMedColleges](https://twitter.com/PodMedColleges)
- [@PodMedColleges](https://www.instagram.com/PodMedColleges)

THE
4 YEAR
 PODIATRIC MEDICAL CURRICULUM IS
ROBUST & RIGOROUS
 OFFERING MANY CHALLENGES &
MUCH SATISFACTION

AFTER COMPLETING
4 YEARS
 OF PODIATRIC MEDICAL STUDIES
PODIATRIC PHYSICIANS
 APPLY FOR A COMPREHENSIVE
3 YEAR
 PODIATRIC MEDICINE & SURGERY RESIDENCY
(PMSR)

PODIATRIC PHYSICIANS
 rank **#7**
 IN THE US NEWS
 AND WORLD REPORTS
25 BEST JOBS
 that pay **100K**

ON AVERAGE
DPMS
 EARN **\$144,000** per year
 AND WORK ON AVERAGE
40 HOURS per week

COLLEGES OF PODIATRIC MEDICINE

ARIZONA

ARIZONA SCHOOL OF PODIATRIC MEDICINE AT MIDWESTERN UNIVERSITY
 (AZPOD)
 Glendale, AZ
 (623) 572-3275; (888) 247-9277
WWW.MIDWESTERN.EDU/AZPOD

CALIFORNIA

CALIFORNIA SCHOOL OF PODIATRIC MEDICINE AT SAMUEL MERRITT UNIVERSITY
 (CSPM)
 Oakland, CA
 (510) 879-9218
WWW.SAMUELMERRITT.EDU/PODIATRIC_MEDICINE

WESTERN UNIVERSITY OF HEALTH SCIENCES COLLEGE OF PODIATRIC MEDICINE
 (WUCPM)
 Pomona, CA
 (909) 469-5485
HTTP://PROSPECTIVE.WESTERNU.EDU/PODIATRY/WELCOME

FLORIDA

BARRY UNIVERSITY SCHOOL OF PODIATRIC MEDICINE
 (BUSPM)
 Miami Shores, FL
 (305) 899-3123; (800) 695-2279
WWW.BARRY.EDU/PODIATRY

ILLINOIS

DR. WILLIAM M. SCHOLL COLLEGE OF PODIATRIC MEDICINE AT ROSALIND FRANKLIN UNIVERSITY OF MEDICINE & SCIENCE
 (SCPM)
 North Chicago, IL
 (847) 578-3204; (800) 843-3059
WWW.ROSALINDFRANKLIN.EDU/SCHOLL

IOWA

DES MOINES UNIVERSITY COLLEGE OF PODIATRIC MEDICINE & SURGERY
 (DMU - CPMS)
 Des Moines, IA
 (515) 271-1499
WWW.DMU.EDU/CPMS

NEW YORK

NEW YORK COLLEGE OF PODIATRIC MEDICINE
 (NYCPM)
 New York, NY
 (212) 410-8098; (800) 526-6966
WWW.NYCPM.EDU

OHIO

KENT STATE UNIVERSITY COLLEGE OF PODIATRIC MEDICINE
 (KSUCPM)
 Independence, OH
 (800) 821-6562 (INSIDE OHIO); (800) 238-7903 (OUTSIDE OHIO)
WWW.KENT.EDU/CPM

PENNSYLVANIA

TEMPLE UNIVERSITY SCHOOL OF PODIATRIC MEDICINE
 (TUSPM)
 Philadelphia, PA
 (215) 625-5451
HTTP://PODIATRY.TEMPLE.EDU

CHAPTER 1: DISCOVER PODIATRIC MEDICINE

INTRODUCTION TO PODIATRIC MEDICINE

A podiatrist is a doctor of podiatric medicine (DPM), known also as a podiatric physician or surgeon, qualified by their education and training to diagnose and treat conditions affecting the foot, ankle and related structures of the leg. When treating patients, this system is also known as the lower extremity. Podiatric physicians are uniquely qualified among medical professionals to treat the lower extremity based on their education, training and expertise. Podiatrists are defined as physicians by the federal government.

A DPM is a specialist in the prevention, diagnosis, and treatment of lower extremity disorders, diseases and injuries. A podiatric physician works independently, utilizes x-rays and laboratory tests for diagnostic purposes, prescribes medications, orders physical therapy, sets fractures, and performs surgery. As part of a healthcare team, the DPM works closely with other health professionals to treat and control disease.

A healthy lower extremity is essential to a patient's overall well-being; it can also be a key indicator of serious health problems. Arthritis, diabetes, nerve and circulatory disorders can be routinely detected in the lower extremity by a DPM. Recent studies have shown that, compared to other healthcare professionals, podiatric physicians are the most proficient at treating diabetic complications in the lower extremity, preventing amputations, reducing hospital stays, and decreasing the economic burden to our health-care delivery systems (CARLS, ET AL., 2011).

Good candidates with which to discuss podiatry careers are students who have medical career interests in **sports medicine, surgery, dermatology, pediatrics, radiology, and infectious diseases**. They may also express a desire to work one-on-one with patients. Additionally, students with strong business, social, community service and leadership backgrounds will be able to match these interests to a career in podiatric medicine. Students with strong research preparation are able to pursue physician-scientist options within podiatric medicine.

SHADOWING A PODIATRIC PHYSICIAN

Shadowing a DPM has been proven to be one of the best ways for a student to learn about the countless, positive aspects of a career in podiatric medicine¹. Students who shadow a DPM are often allowed to watch actual patient procedures, discuss potential diagnoses with the physician or permitted to review diagnostic images with the DPM. The AACPM is proud to host the DPM Mentors Network™ - a tool for students to locate local DPMs from which to explore careers in podiatric medicine. There are several avenues to assist you in making a referral to a DPM near your campus who is trained in mentoring undergraduate, pre-health students.

To locate a DPM Mentor or Speaker, visit:
WWW.DPMNETWORK.ORG



PHOTO COURTESY OF DES MOINES UNIVERSITY COLLEGE OF PODIATRIC MEDICINE AND SURGERY

The human foot is a complex structure containing 26 bones, plus muscles, nerves, ligaments, and blood vessels, and is designed for balance and mobility.

CAREER OPPORTUNITIES

Podiatric physicians are highly trained doctors and surgeons who treat one of the most fundamental parts of the body. Feet are complex anatomical structures, all-in-one stabilizers, shock absorbers, and propulsion engines that are instrumental to overall health and well-being. The human foot is a complex structure containing 26 bones, plus muscles, nerves, ligaments, and blood vessels, and is designed for balance and mobility. Because of this function, the foot has a highly significant interrelationship with the rest of the body, which means that it may be the first area to show signs of serious conditions, such as diabetes and heart disease. For example, diabetics are prone to foot ulcers and infections due to their poor circulation. Since the podiatric physician is often the first to detect symptoms of these disorders, he or she becomes a vital and sometimes lifesaving link in the healthcare team.



PHOTO COURTESY OF DR. WILLIAM M. SCHOLL COLLEGE OF PODIATRIC MEDICINE AT ROSALIND FRANKLIN UNIVERSITY

Within the profession, podiatric physicians can specialize in a variety of areas such as **surgery, orthopedics, or public health**. Besides these certified specialties, podiatrists may practice a subspecialty such as **sports medicine, pediatrics, dermatology, radiology, geriatrics, or diabetic foot care**. Podiatric physicians are the only doctors to receive specialized medical and surgical training, and board certification in the care of the lower extremity.



PHOTO COURTESY OF SAMUEL MERRITT UNIVERSITY



Diabetes is also the leading cause of non-traumatic lower-limb amputation.

There are two major certifying boards for podiatric physicians. The American Board of Podiatric Medicine (ABPM) is the certifying board for the specialty areas of podiatric orthopedics and primary podiatric medicine. The American Board of Foot and Ankle Surgery (ABFAS) is the certifying board for the specialty area of foot and ankle surgery. Most podiatric physicians are board certified. Certification is considered to be an earned credential for those podiatric physicians who have achieved higher levels of skill and ability based upon completion of specific advanced training, clinical experiences and examination.

You can help your students understand podiatric medicine by describing to them the different types of patients a DPM sees and treatments a DPM might use.

In a typical practice, a DPM will see a range of patients who present with lower extremity or foot ailments such as trauma, tumors, ulcers, fractures, skin and nail diseases or congenital deformities. DPMs may use high-tech imaging such as MRIs, CTs, X-rays, motion capture software or Doppler sensors to help with their diagnostic processes.

Podiatric physicians treat the full spectrum of patients in their offices, clinics, and surgical centers. Elderly patients enjoy freedom from pain at the hands of a DPM when treated for conditions such as corns, calluses, bunions, heel spurs, arch problems, shortened tendons, cysts, bone disorders, and abscesses. Pediatric patients can be seen for treatment of ingrown toe nails, flat feet or improper foot alignment.

A professional athlete may seek out a DPM who designs mechanical devices to correct running patterns to increase his or her overall ability to move more efficiently; other healthy adults are seen for corrective insert fittings for everyday activities. These devices are called custom orthotics. Some deformities may require podiatric physicians to design custom braces, splints or shoes to correct foot or ankle deformities.

When patients present with trauma related injuries in the Emergency Room, the on-call DPM may cast the patient to stabilize and immobilize the injuries of foot and ankle. These injuries may range from simple conditions, such as sprains, to more serious conditions, such as fractures. When necessary, some patients will be candidates for more invasive, surgical treatments to correct these traumatic injuries.

Podiatric physicians and diabetic patients are a tremendous team when it comes to diagnosing preventable diabetic foot problems. Podiatric physicians are experts in lower extremity amputation prevention. After completing a comprehensive foot examination, a DPM will be able to detect abnormalities or symptoms of neuropathy or vasculopathy that lead to diseases like Charcot in patients with diabetes. According to the National Institutes of Health, diabetes is the seventh leading cause of death in the United States; the Center for Disease Control estimates that 29 million people are living with diabetes in the U.S. currently. Diabetes is also the leading cause of non-traumatic lower-limb amputation. A study by Thomson Reuters Healthcare found that care by a podiatrist can reduce hospitalization for diabetics and save millions in health care costs (CARLS ET AL., 2011).



PHOTO COURTESY OF TEMPLE UNIVERSITY SCHOOL OF PODIATRIC MEDICINE

The DPM is a partner in the overall healthcare team, working with other physicians when symptoms observed in the feet indicate disorders, such as diabetes, arthritis, heart disease or kidney disease.

All patients can expect to be provided individual consultations concerning the continued treatment of their disorders or injuries. A DPM also provides healthy patients with preventive foot care information. A podiatric physician prescribes suitable medication to his or her patients to help alleviate pain, discomfort, or infection. **The DPM is a partner in the overall healthcare team, working with other physicians when symptoms observed in the feet indicate disorders, such as diabetes, arthritis, heart disease, or kidney disease.**

Most podiatric physicians work in hospitals and clinics. Some DPMs work in private practices and employ support staff and other health professionals. However, not all career paths lead towards patient care solely – some DPMs engage in clinical research trials while others are adept legislators or policymakers. Podiatric physicians serve in the Armed Forces, domestically and abroad. The U.S. Public Health Service, Department of Veterans Affairs and municipal health departments employ DPMs, both clinically and as public health advocates. Colleges, universities and major health professional schools provide podiatric physicians opportunities to teach. DPMs are also deans and chairs of academic departments within institutions of higher education.



PHOTO COURTESY OF DES MOINES UNIVERSITY COLLEGE OF PODIATRIC MEDICINE AND SURGERY



JOB OUTLOOK

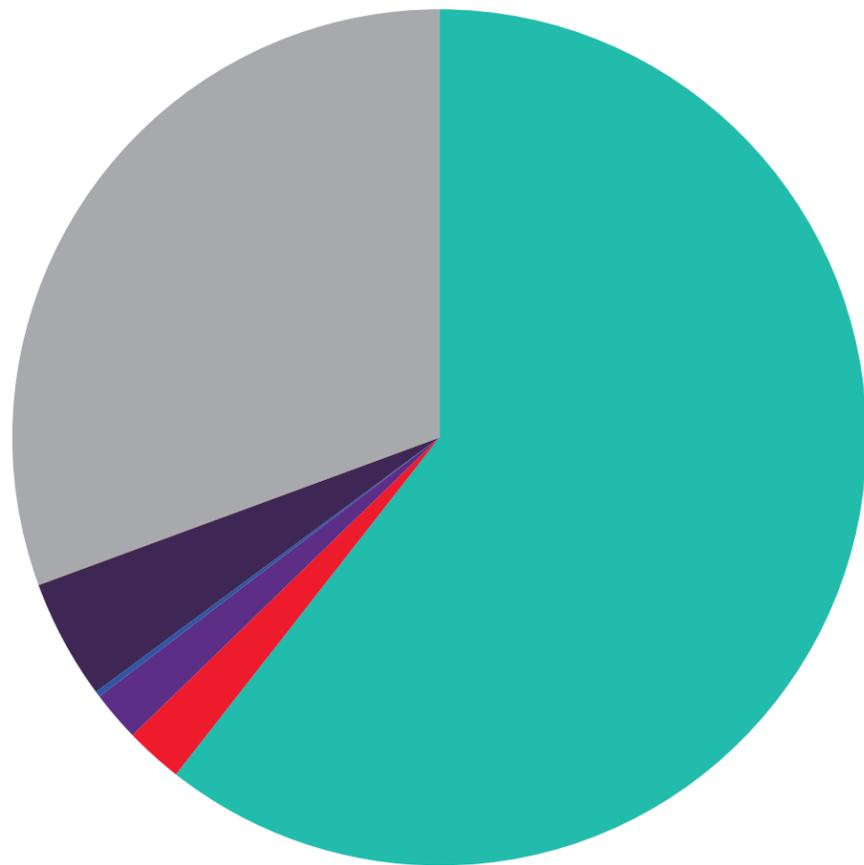
Now is one of the most exciting times for new podiatric physicians entering study and practice. With robust practice options available to graduates, young professionals can expect to change the lives of the patients they treat.

One of the opportunities for future practitioners is the vast number of current DPMs desiring to retire in the next decade. The American Podiatric Medical Association (APMA) reports its average member is 53 years of age and seeks to retire between the ages of 61 and 70. A 2007 study conducted by the Center for Health Workforce Studies at the School of Public Health, University at Albany concluded in order to serve the growing population of patients, the colleges of podiatric medicine will have to increase their production of graduates just to meet the demand (Wing, Forte, Dionne, & Christina, 2008).

Currently, there are approximately 15,000 practicing podiatrists in the United States. After the current U.S. census, that means there are over 20,000 potential patients per practicing podiatrist! According to the Bureau of Labor Statistics (BLS), podiatric physicians held over 11,000 full time jobs in 2016.

Despite these statistics, employment of podiatrists is projected to grow 10 percent from 2016 to 2026, faster than the average for all occupations, according to the BLS. Additional patients will seek the services of a DPM for lower extremity care due to the rising number of injuries in an active population, the growing rates of obesity and diabetes, and the increasingly older population. Without major advancements to promote podiatric medicine as a career choice now, many patients will go underserved in the near future.

ETHNIC IDENTITIES OF PRACTICING PODIATRISTS IN 2018



● WHITE: 61%
 ● SPANISH/HISPANIC/LATINO/LATINA: 2%
 ● ASIAN: 5.2%
 ● BLACK OR AFRICAN AMERICAN: 2.4%
 ● AMERICAN INDIAN OR ALASKA NATIVE: .2%
 ● DID NOT REPORT: 29.3%

SOURCE: DPMS: ETHNIC IDENTIFICATION ON MEMBERSHIP RECORDS OF APMA, MARCH 2018

BENEFITS AND INCOME POTENTIAL

In 2015, APMA members reported earning, on average, \$181,120 in the previous year. Twelve percent of respondents earned \$250,000 or more in the previous year, while 16.4% of practicing podiatric physicians reported earning less than \$100,000.

Also reporting data from 2016, the BLS further breaks these figures down by working environment, geographic choice, and earning potential for current and future employment opportunities.

THE LARGEST EMPLOYERS OF PODIATRISTS WERE AS FOLLOWS:

• GROUP PRACTICES WITH OTHER PHYSICIANS OR SPECIALISTS	64%
• PRACTICES WITH ONLY PHYSICIANS	10
• FEDERAL GOVERNMENT	8
• SELF-EMPLOYED PHYSICIANS	7
• HOSPITALS; STATE, LOCAL, AND PRIVATE	6

IN MAY 2017, THE MEDIAN ANNUAL WAGES FOR PODIATRISTS IN THE TOP INDUSTRIES IN WHICH THEY WORKED WERE AS FOLLOWS:

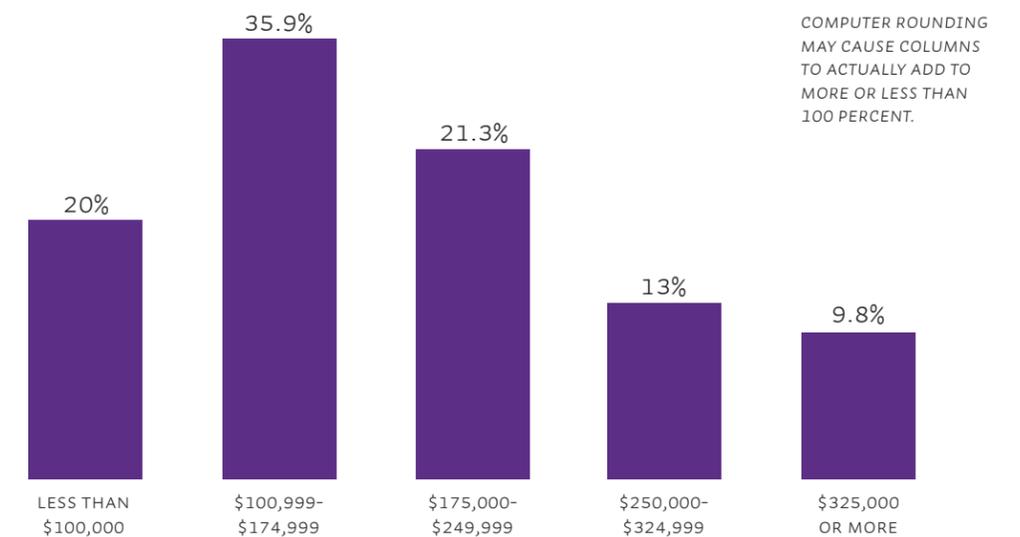
• OFFICES OF PHYSICIANS	\$175,510
• OFFICES OF OTHER HEALTH PRACTITIONERS	\$123,160
• FEDERAL GOVERNMENT	\$125,400
• HOSPITALS; STATE, LOCAL, AND PRIVATE	\$106,240

THE TOP METROPOLITAN AREAS FOR THE HIGHEST PAID PODIATRIC PHYSICIANS ARE:

• URBAN, HONOLULU, HI	\$283,760
• SILVER SPRING-FREDERICK-ROCKVILLE, MD METROPOLITAN DIVISION	\$253,110
• SAN ANTONIO-NEW BRAUNFELS, TX	\$231,140
• GARY, IN METROPOLITAN DIVISION	\$225,380
• MINNEAPOLIS-ST. PAUL-BLOOMINGTON, MN-WI	\$219,500
• CHICAGO-NAPERVILLE-ARLINGTON HEIGHTS, IL METROPOLITAN DIVISION	\$206,100
• ALLENTOWN-BETHLEHEM-EASTON, PA-NJ	\$196,450
• CAPE CORAL-FORT MYERS, FL	\$196,060
• ST. LOUIS, MO-IL	\$192,570
• PITTSBURGH, PA	\$186,760

Podiatric physicians are licensed in all 50 states, the District of Columbia, and Puerto Rico.

NET INCOME IN 2014



COMPUTER ROUNDING MAY CAUSE COLUMNS TO ACTUALLY ADD TO MORE OR LESS THAN 100 PERCENT.

TOTAL # OF RESPONDENTS: 569

MEAN: \$183,269
 MEDIAN: \$156,000

SOURCE: 2014 PODIATRIC PRACTICE SURVEY
 NOTE: NOT ASKED OF ASSOCIATE PODIATRISTS

WHY CONSIDER A CAREER IN PODIATRIC MEDICINE?

Most podiatric physicians choose podiatric medicine for its direct patient experience, work-life balance in a surgical specialty and the income potential in a healthcare occupation. In a recent practice survey, most podiatrists stated they enjoy a 30 to 60 hour work week, with the average DPM working just over 40 hours per week. This is well below the average work week for the most sought after MD and DO specialties (e.g., dermatology (45.5 HOURS/WEEK) or ophthalmology (47 HOURS/WEEK) (Dorsey, Jarjoura, & Rutecki, 2003)). There are many additional benefits, however.

Most podiatric physicians enjoy the satisfaction of working one-on-one with their patients. In a 2014 practice survey conducted by the APMA, podiatric physicians reported treating approximately 100 patients per week. This manageable patient load allows for a DPM to provide in-office treatments and focus on patient wellness.



PHOTO COURTESY OF KENT STATE UNIVERSITY COLLEGE OF PODIATRIC MEDICINE

Some podiatrists will be able to set their own hours but often work evenings and weekends to accommodate their patients. Podiatrists who are affiliated with hospitals or clinics may also have an on-call schedule, where they respond to all lower extremity related emergencies during weekends or evenings. However, most lower-extremity treatments are elective and may be scheduled during normal office hours.

The individual who is called to become a Doctor of Podiatric Medicine joins a community of deeply committed physicians who provide care to vulnerable populations in the U.S. - those who are seeking healthcare for themselves, or seeking healthcare for a loved-one. Podiatric physicians are rigorous scholars, curious researchers, and public health advocates with deep commitments to community service and volunteering. Doctors of Podiatric Medicine perform acts of humanitarianism and outreach, globally, to pursue their passion: excellence in foot and ankle medical care and surgery.

Rewarding patient experiences, fulfilling lifestyle and high income are all unmistakable reasons to explore podiatric medicine as a first-choice medical specialty. It is often said, podiatric medicine is the best kept secret in medicine...**help a student discover an amazing career by shining a light onto podiatric medicine. Introduce a student to a career in podiatric medicine today!**

WHY PODIATRY?



JACQUELINE BRILL, DPM

It's not easy returning from a medical mission, but stepping back into her life in Miami, Florida was particularly difficult for Jacqueline Brill, DPM, after she spent nearly a week in Haiti in 2011. "You feel so much guilt and sadness when you get back home. You want to stay there and keep helping as many people as possible," Dr. Brill said, her voice cracking.

Brill and a number of other podiatric physicians from the Barry University School of Podiatric Medicine spent time in Haiti as part of the University of Miami's Project Medishare in a tent hospital outside of the Port-au-Prince airport. Dr. Brill and the medical team saw up to 70 patients per day while working 12-hour shifts. She dealt mainly with post-operative complications from surgeries and amputations, performed in the chaotic days immediately following the earthquake. Dr. Brill also treated acute injuries from car accidents, a gunshot wound on a police officer, and severe fractures from children falling off piles of rubble.

Jackie Brill was destined to find podiatric medicine. She was tracking for allopathic medical school when she happened to visit a podiatrist in her area to receive treatment for a congenital foot deformity. After that consult, she decided to research the career more carefully. All her research into careers in podiatric medicine led Brill to apply to Barry and to find her passion in podiatric surgery. After residency, Dr. Brill was working part time in private practice and part time at Barry. She was virtually thrust into teaching by a fellow colleague and residency director. "I never thought I'd like it," she laughed. "I had complete stage fright at first, but then it grew on me." She now teaches surgery and trauma both in the classroom and the clinic and finds that the best part of each day is imparting knowledge to students. "It's great to see students absorb the information you are teaching. That's the part of my job that is so rewarding."

PROVIDED BY THE AMERICAN PODIATRIC MEDICAL ASSOCIATION. PORTIONS OF THIS PROFILE HAVE BEEN EXCERPTED FROM MEDEXPRESS, A PUBLICATION OF THE BARRY UNIVERSITY.



AMOL SAXENA, DPM, FAAPSM, FACFAS

Two-time Olympic medalist and US Record-holder Galen Rupp from the Nike Oregon Project might be Dr. Amol Saxena's most famous current patient. And when he partially tore his Achilles Tendon in 2018, he turned his long-time podiatric physician Amol Saxena, DPM for reconstructive surgery. Of Rupp, Dr Saxena was quoted in Portland's The Oregonian, "He's pretty amazing. I've treated almost 100 Olympians. He definitely has the highest pain threshold of anybody I've treated...It's one of those things where it's better to do it (the surgery) when you can plan it. Sometimes (the Achilles) just tears, and you can't plan for that. The recovery is a lot longer when you completely rupture it. Hopefully it will be better than new."

Dr. Saxena has been the Nike Oregon Project's consulting podiatrist since 2006, the same year he began an ESWT clinical trial and developing protocols for the anti-gravity treadmill.

Dr Saxena discovered podiatric medicine while still enrolled as an undergraduate at Washington University in St Louis, MO. A collegiate distance runner himself, an injury while in college caused him to seek out treatment from a local DPM. From there, there was no turning back for Saxena. He built a practice in his hometown of Palo Alto, CA, treating patients with sports injuries and who needed foot and ankle surgeries. Saxena is quick to point out, "I do not do all aspects of podiatric medicine and surgery such as, diabetic foot amputations, skin biopsies nor pediatric clubfoot surgery. I think doctors are better when they specialize in the things they have passion for. Mine is getting individuals back to their desired activities. Podiatry has many aspects; you get to help a lot of people achieve their goals, treating all ages, families & activities. It can be a unique combination of surgery, vascular, dermatology, physical therapy, endocrinology, rheumatology."

FOLLOW THESE AND MORE STORIES ONLINE AT [#ICHOOSEPODIATRY](#) AND [#DISCOVERPODIATRICMEDICINE](#)

CHAPTER 2: APPLYING TO PODIATRIC MEDICAL SCHOOL

PODIATRIC MEDICAL EDUCATION

Podiatric physicians receive medical education and training comparable to other medical doctors, including four years of undergraduate education, four years of graduate education at a college of podiatric medicine and three years of hospital-based residency training. **What a great time to pursue a career in podiatric medicine!**

ACCREDITATION

Schools and colleges which offer the doctor of podiatric medicine degree are accredited by the Council on Podiatric Medical Education (CPME). The CPME is designated by the APMA to serve as the accrediting agency for podiatric medical education. The CPME is recognized by the Council on Higher Education Accreditation (CHEA) and by the U. S. Department of Education. Currently, the CPME accredits nine colleges. Some colleges also have the distinction of being Regionally Accredited. For additional information, please refer to:

[HTTP://CPME.ORG](http://cpme.org)

New schools hold a provisional accreditation status during the first years of enrollment. A college granted a provisional accreditation status may admit students and offer podiatric medical instruction. Prior to the graduation of its inaugural class, a provisionally accredited college will show evidence of meeting the standards and requirements of the CPME that will allow it to attain full accreditation.

CURRICULUM

The four-year podiatric medical curriculum is robust and rigorous, offering students many challenges and much satisfaction.



PHOTO COURTESY OF KENT STATE UNIVERSITY COLLEGE OF PODIATRIC MEDICINE

THIS TABLE SHOWS A GENERAL FOUR-YEAR CURRICULUM; ALL OF THE PODIATRIC COLLEGES VARY IN THE COURSE NAMES, DURATIONS AND IN WHAT YEAR THE COURSES ARE OFFERED. ALSO, SOME COLLEGES OFFER SUBJECT-BASED COURSES, OTHERS OFFER ORGAN SYSTEMS-BASED COURSES, AND OTHERS ARE MIXED. REFER TO THE CURRICULUM PAGES OF COLLEGE WEBSITES FOR EACH COLLEGE'S SPECIFIC CURRICULUM. COLLEGES ALSO VARY AS TO WHEN STUDENTS BEGIN CLINICAL EXPOSURE AND HOW OFTEN STUDENTS ARE IN THE CLINIC; THERE ARE ALSO DIFFERENCES IN WHEN EXTERNAL ROTATIONS, KNOWN AS CLERKSHIPS, BEGIN AND HOW MANY ROTATIONS ARE AVAILABLE.

FOR A MORE COMPLETE LOOK AT THE PODIATRIC MEDICAL CURRICULUM, PLEASE REFER TO:
WWW.AACPM.ORG/
WWW.DISCOVERPODIATRICMEDICINE.ORG

YEAR 1*	YEAR 2
ANATOMY	PATHOLOGY
LOWER EXTREMITY ANATOMY	PHARMACOLOGY
BIOCHEMISTRY	PHYSICAL DIAGNOSIS
NEUROSCIENCES	MICROBIOLOGY**
PHYSICAL DIAGNOSIS	IMMUNOLOGY**
PHYSIOLOGY	GENETICS**
INTRODUCTION TO PODIATRIC MEDICINE	BIOMECHANICS**
MICROBIOLOGY**	RESEARCH**
IMMUNOLOGY**	MEDICINE***
GENETICS**	ORTHOPEDICS***
BIOMECHANICS**	PODIATRIC SURGERY***
RESEARCH**	RADIOLOGY***

* NOTE: SOME COLLEGES OFFER A SEPARATE COURSE IN A SUBJECT (SUCH AS EMBRYOLOGY), WHEREAS OTHERS OFFER IT AS PART OF ANOTHER COURSE.

** COURSES THAT MAY BE OFFERED IN YEAR 1 OR YEAR 2

*** DIDACTIC COURSES THAT MAY BE OFFERED IN YEAR 2 OR YEAR 3

AMERICAN PODIATRIC MEDICAL LICENSING EXAMINATIONS (APMLE) ARE TAKEN IN TWO PARTS WHILE IN PODIATRIC MEDICAL SCHOOL:

PART I

COVERS BASIC SCIENCE AREAS AND IS GENERALLY TAKEN AT THE CONCLUSION OF THE SECOND YEAR.

PART II

COVERS CLINICAL AREAS AND IS TAKEN IN THE SPRING OF THE FOURTH YEAR, PRIOR TO GRADUATION.

PART II (CSPE)

THE CLINICAL SKILLS PATIENT ENCOUNTER (PART II CSPE)

ASSESSES PROFICIENCY IN PODIATRIC CLINICAL TASKS NEEDED TO ENTER RESIDENCY AND IS GENERALLY TAKEN IN THE SUMMER PRIOR TO THE START OF THE FOURTH YEAR.

SATISFACTORY COMPLETION OF PARTS I AND II OF THE APMLE IS ONE OF THE REQUIREMENTS TO START RESIDENCY TRAINING.

YEAR 3	YEAR 4
IMMUNOLOGY	CLINICAL ALL COLLEGES OFFER CLINICAL ROTATIONS IN EMERGENCY MEDICINE, INTERNAL MEDICINE, GENERAL SURGERY, & RADIOLOGY.
GENETICS	
BIOMECHANICS	
RESEARCH	
MEDICINE***	CLERKSHIPS
ORTHOPEDICS***	
PODIATRIC SURGERY***	
RADIOLOGY***	

OTHER/ELECTIVES
PEDIATRICS
PUBLIC HEALTH
PRACTICE MANAGEMENT
SPORTS MEDICINE
OTHER COURSES THAT ARE UNIQUE TO A PARTICULAR SCHOOL OR COLLEGE

CURRICULUM (CONTINUED)

In addition, most of the colleges of podiatric medicine offer problem-based learning, computer assisted instruction, or computer simulated patient encounters that complement traditional pedagogical methods.

Many of the colleges of podiatric medicine also offer dual degree opportunities which allow students to tailor their clinical educational needs to a complementary curriculum. Dual degree options range from business management (MBA) to public health (MPH) to doctoral-level research (PhD). Refer to each college description for additional information and admissions information to dual or combined degree programs.



PHOTO COURTESY OF TEMPLE UNIVERSITY SCHOOL OF PODIATRIC MEDICINE

Many of the colleges of podiatric medicine also offer dual degree opportunities which allow students to tailor their clinical educational needs to a complementary curriculum.



PHOTO COURTESY OF DES MOINES UNIVERSITY COLLEGE OF PODIATRIC MEDICINE AND SURGERY

PODIATRIC MEDICINE AND SURGERY RESIDENCY

A podiatric residency is postgraduate training and a requirement for all podiatric medical students that have completed four years of professional graduate education and have passed the required national boards, the American Podiatric Medical Licensing Examinations (APMLE) Part I and II. Post graduate training provides podiatric medical graduates with structured learning and exposure to the profession as they transition from student doctors to competent, independent physicians.

The governing body that approves Podiatric Residencies is the Council on Podiatric Medical Education (CPME). Their primary purpose is to promote and assure that podiatric residency programs are meeting high standards and educational quality established by the profession.

WHAT MAKES PODIATRIC RESIDENCY PROGRAMS UNIQUE?

The accrediting body for the profession requires all podiatric residency programs encompass both podiatric medicine and surgery. The programs are resource-based, competency-driven, assessment-validated and consist of 3-YEARS of postgraduate training in inpatient and outpatient medical and surgical management of the lower extremity.

Our research has found that applying to surgical residencies remains a highly competitive experience in medical education particularly in MD & DO graduate programs. The AAMC reports that in 2017, 37.8% of the residency applicants applied to general surgery. For foreign medical graduates, the data report shows 36.6% (AAMC, 2017). In contrast, the CPME reports 617 approved residency positions for podiatric medicine and surgery. In 2017, 95% of those that applied for residency were placed. Our medical graduates also have the option of choosing a residency with a credentialing in reconstructive rearfoot/ankle surgery (PMSR/RRA).

REFERENCE:

WWW.AACPM.ORG/RESIDENCIES

AMERICAN ASSOCIATION OF COLLEGES OF PODIATRIC MEDICINE/PRESS RELEASE 6/30/2017

[HTTPS://WWW.AAMC.ORG/DOWNLOAD/358920/DATA/SURGERY-GEN.PDF](https://WWW.AAMC.ORG/DOWNLOAD/358920/DATA/SURGERY-GEN.PDF)

[HTTPS://WWW.AAMC.ORG/SERVICES/ERAS/STATS/359278/STATS.HTML](https://WWW.AAMC.ORG/SERVICES/ERAS/STATS/359278/STATS.HTML)

LICENSING AND SCOPE OF PRACTICE

Most states will also require a written and/or oral examination prior to licensure. The scope of practice varies from state to state. State licensing requirements generally include graduation from one of the nine accredited colleges of podiatric medicine, passage of the APMLE exams and post-graduate training as well as written and oral examinations.

Additionally, three years of residency training are required for board certification. Podiatric physicians may also become certified in one or both specialty areas: primary care and orthopedics or surgery. National podiatric specialty boards grant certification to qualified podiatric physicians who have completed the specified educational requirements and who successfully complete written and oral examinations.

Additional information regarding board certification can be found by contacting:

AMERICAN BOARD OF PODIATRIC MEDICINE
3812 SEPULVEDA BOULEVARD, SUITE 530
TORRANCE, CALIFORNIA 90505
310-375-0700
ADMIN@ABPMED.ORG
WWW.ABPM.ORG

AMERICAN BOARD OF FOOT AND ANKLE SURGERY
445 FILLMORE STREET
SAN FRANCISCO, CA 94117-3404
415-553-7800
INFO@ABFAS.ORG
WWW.ABFAS.ORG

All eligible 4th year students participate in a national, centralized application and matching service called the Central Application Service for Podiatric Residencies (CASPR). This matching program is similar to that of allopathic medicine and saves time and money during the residency search. All residency programs require that students have successfully completed Part I and Part II of the American Podiatric Medical Licensing (APMLE) Examination to be eligible for a residency.

QUALIFICATIONS FOR PODIATRIC MEDICAL SCHOOL

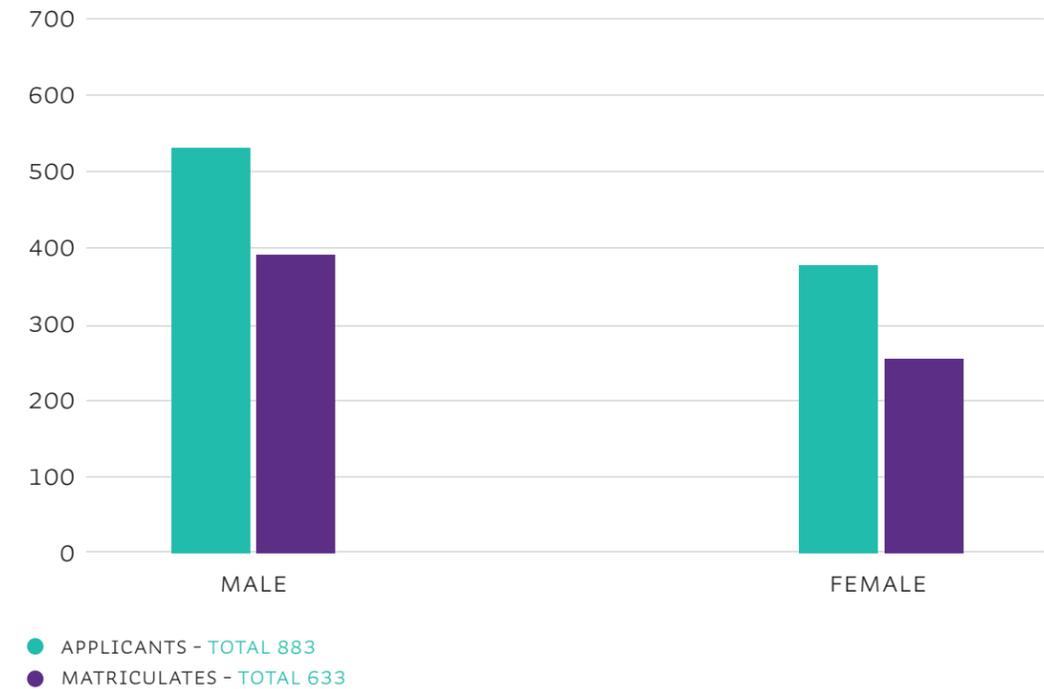
Successful candidates who apply for entry into one of the nine US colleges of podiatric medicine display positive characteristics of mature adults. Evidence of preparation for a career in medicine, and specifically a career in podiatric medicine, should also be present in each application. Candidates with strong science preparation are preferred.

Attributes of successful candidates also include a strong sense of inter- and intrapersonal communication skills, problem solving proficiency and good time management. Successful candidates also have a demonstrable record of community service or good works, a strong academic record in the sciences, and are well-rounded individuals.

In 2017-2018, 883 individuals applied to at least one of the nine colleges of podiatric medicine. A total of 633 first year students entered into study in the fall of 2018. Women made up 378 (43%) of the applicants and 251 (40%) of matriculating students in 2018.

Underrepresented minority student populations are expected to increase well into the future.

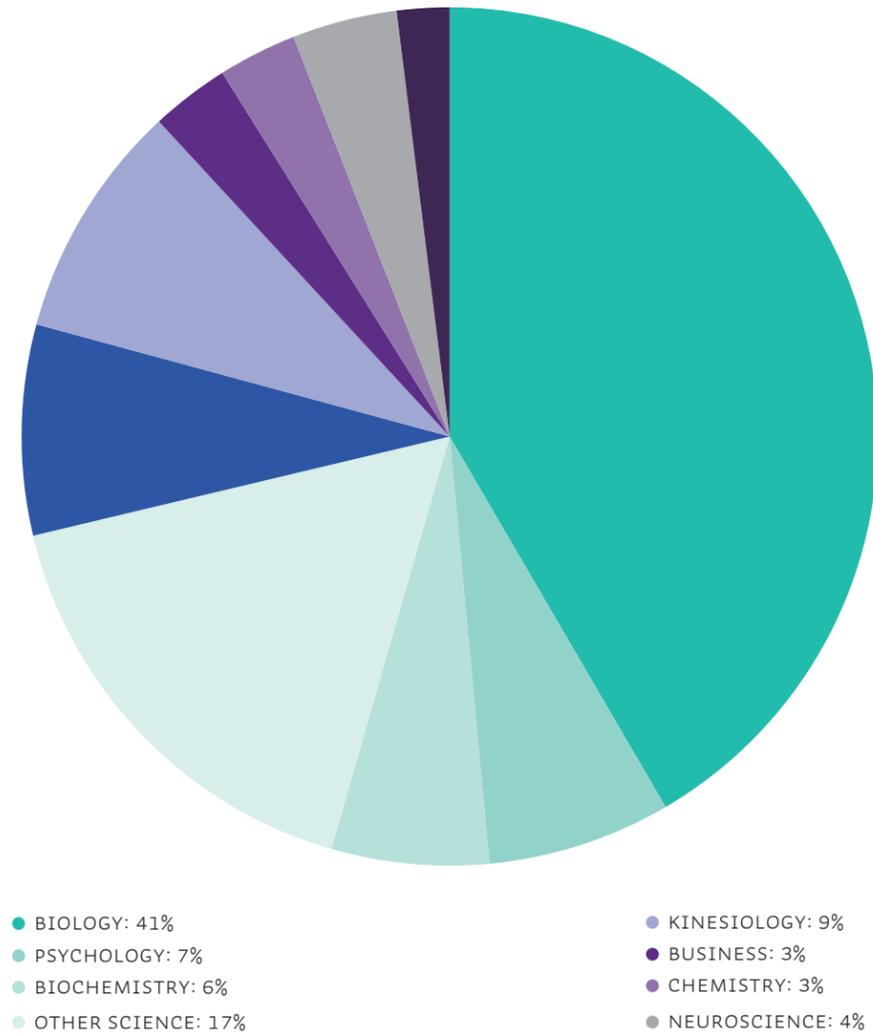
APPLICANTS VS. MATRICULANTS BY SEX IN 2018



GENERAL ADMISSIONS REQUIREMENTS

The specific criteria to enter a college of podiatric medicine includes first completing at least three years (90 semester hours or the equivalent) of college credit at an accredited institution. About 98% of the students who enter a college of podiatric medicine have a bachelor’s degree. Of those having earned a degree, most will have studied a life or natural science; however, non-science majors are very successful podiatric medical students. A growing number of candidates have also completed graduate study.

TOP 10 UNDERGRADUATE MAJORS IN 2018



SUMMARY OF COURSE PREREQUISITES FOR ADMISSION TO PODIATRIC MEDICAL SCHOOL

	AZPOD	BUSPM	CSPM	DMU-CPMS	KSUCPM	NYCPM	SCPM	TUSPM	WUCPM
ANATOMY/PHYSIOLOGY		●	●	●	●	●		●	●
BEHAVIORAL SCIENCES									●
BIOCHEMISTRY		●	●	●	●	●		●	●
BIOLOGY	●	●	●	●	●	●	●	●	●
CELL BIOLOGY		●						●	
CHEMISTRY	●	●	●	●	●	●	●	●	●
EMBRYOLOGY								●	
ENGLISH/COMPOSITION	●	●	●	●	●	●	●	●	●
GENETICS		●						●	
HISTOLOGY			●	●	●	●		●	●
IMMUNOLOGY			●						
MEDICAL TERMINOLOGY				●	●				
MICROBIOLOGY			●		●	●		●	●
ORGANIC CHEMISTRY	●	●	●	●	●	●	●	●	●
OTHER LIBERAL ARTS									
PHYSICS	●	●	●	●	●	●	●	●	●
PSYCHOLOGY				●				●	
SOCIOLOGY									
ZOOLOGY			●						●
TOTAL MINIMUM # OF HOURS REQUIRED (SEMESTER/QUARTER)	90/135	90/135	90/135	90/135	90/135	90/135	90/135	90/135	90/135
BACCALAUREATE DEGREE PREFERRED	YES	YES	YES	YES	YES	YES	YES	YES	YES

● REQUIRED COURSE ● RECOMMENDED COURSE

AZPOD - ARIZONA SCHOOL OF PODIATRIC MEDICINE AT MIDWESTERN UNIVERSITY
 BUSPM - BARRY UNIVERSITY SCHOOL OF PODIATRIC MEDICINE
 CSPM - CALIFORNIA SCHOOL OF PODIATRIC MEDICINE AT SAMUEL MERRITT UNIVERSITY
 DMU-CPMS - DES MOINES UNIVERSITY COLLEGE OF PODIATRIC MEDICINE AND SURGERY
 KSUCPM - KENT STATE UNIVERSITY COLLEGE OF PODIATRIC MEDICINE
 NYCPM - NEW YORK COLLEGE OF PODIATRIC MEDICINE
 SCPM - DR. WILLIAM M. SCHOLL COLLEGE OF PODIATRIC MEDICINE AT ROSALIND FRANKLIN UNIVERSITY OF MEDICINE & SCIENCE
 TUSPM - TEMPLE UNIVERSITY SCHOOL OF PODIATRIC MEDICINE
 WUCPM - WESTERN UNIVERSITY OF HEALTH SCIENCES COLLEGE OF PODIATRIC MEDICINE

The schools and colleges of podiatric medicine look at many factors when deciding which applicants to accept into their programs. Initially, admissions committees evaluate the applicant’s results from the Medical College Admission Test (MCAT), grade point average (GPA), letters of recommendation, and personal interview. Additional information provided in the application, including leadership, volunteerism, work experience, and demonstrable knowledge of the practice of podiatric medicine, all play a role in the final acceptance decision.

UNDERGRADUATE TIMELINE FOR APPLYING TO PODIATRIC MEDICAL COLLEGES

It’s never too early to start thinking about a career in podiatric medicine. Both advisors and students can use this guide as a general outline of how to prepare to apply to the colleges of podiatric medicine. Please know that applicants can be successful even if they arrive at the decision to apply to podiatry later in their academic career or if they are not “science-majors.” Preparing for a career in podiatry looks a lot like preparing for a career in most medical fields.

PLEASE REFER TO THE TABLE ON PAGES 35-37.

UNDERGRADUATE TIMELINE FOR APPLYING TO PODIATRIC MEDICAL COLLEGES

FRESHMAN

- ❑ VISIT WWW.DISCOVERPODIATRICMEDICINE.ORG TO LEARN MORE ABOUT CAREERS IN PODIATRIC MEDICINE. SPEAK WITH YOUR PRE-HEALTH ADVISOR TO PLAN COURSEWORK FOR PRE-PODIATRY/PRE-MEDICAL TRACK.
 - ❑ REVIEW THE AACPM COLLEGE INFORMATION BOOK (CIB) ONLINE BY ADDING WWW.AACPM.ORG TO YOUR FAVORITES.
- THE CIB INCLUDES INFORMATION FOR ALL OF THE NINE US COLLEGES OF PODIATRIC MEDICINE, ADMISSIONS CRITERIA, MINIMUM ENTRANCE REQUIREMENTS, AND MORE. WHILE MOST SCHOOLS REQUIRE A MINIMUM OF ONE YEAR OF BIOLOGY, GENERAL (INORGANIC) CHEMISTRY, ORGANIC CHEMISTRY, PHYSICS AND ENGLISH, SPECIFIC REQUIREMENTS VARY FROM SCHOOL TO SCHOOL.
- ❑ COMPLETE REQUIRED COURSEWORK.
 - ❑ THINK ABOUT WHICH MAJOR AND/OR MINORS YOU MAY WISH TO PURSUE.
 - ❑ DEVELOP GOOD STUDY SKILLS BY FORMING STUDY GROUPS OR ATTENDING STUDY-SKILLS PROGRAMS.
 - ❑ MAINTAIN A COMPETITIVE GPA.
 - ❑ IDENTIFY EXTRACURRICULAR ACTIVITIES YOU ENJOY OR PROVIDE YOU WITH AN OUTLET TO RELIEVE STRESS. MAKE TIME TO PARTICIPATE.
 - ❑ APPLY TO VOLUNTEER OR WORK IN A MEDICAL SETTING (I.E., CLINIC, ER, HOSPITAL) DURING BREAKS OR SUMMER MONTHS.
 - ❑ READ ARTICLES, RESEARCH AND CURRENT INTERESTS TO LEARN ABOUT PODIATRIC MEDICINE AND HEALTHCARE IN AMERICA.
 - ❑ TALK TO UPPER-CLASS, PRE-PODIATRY STUDENTS.
 - ❑ SHADOWING A DPM IS EXCELLENT EXPOSURE TO CAREERS IN PODIATRIC MEDICINE. VISIT OUR DPM NETWORK TO LOCATE A DPM NEAR YOU: WWW.DPMNETWORK.ORG

SOPHOMORE

- ❑ VISIT WWW.DISCOVERPODIATRICMEDICINE.ORG TO LEARN MORE ABOUT CAREERS IN PODIATRIC MEDICINE. SPEAK WITH YOUR PRE-HEALTH ADVISOR TO PLAN COURSEWORK FOR PRE-PODIATRY/PRE-MEDICAL TRACK.
- ❑ REVIEW THE AACPM COLLEGE INFORMATION BOOK (CIB) ONLINE BY ADDING WWW.AACPM.ORG TO YOUR FAVORITES.
- ❑ COMPLETE REQUIRED COURSEWORK TO KEEP YOU ON TRACK.
- ❑ SELECT MAJOR AND MINOR COURSES OF STUDY. WORK OUT ANY SCHEDULE CONFLICTS WITH GRADUATION REQUIREMENTS AND APPLICATION REQUIREMENTS. PLAN FOR SUMMER SCHOOL ATTENDANCE IF NECESSARY.
- ❑ MAINTAIN COMPETITIVE GPA.
- ❑ CONTINUE SHADOWING A VARIETY OF DPMS. VISIT: WWW.DPMNETWORK.ORG
- ❑ RESEARCH PODIATRIC MEDICAL SCHOOL ENTRANCE REQUIREMENTS. REVIEW THE AACPM'S CIB, WHICH INCLUDES DESCRIPTIONS OF ALL OF THE PODIATRIC MEDICAL COLLEGES, ADMISSIONS CRITERIA, MINIMUM ENTRANCE REQUIREMENTS, AND MORE.
- ❑ LOOK FOR AND APPLY TO PARTICIPATE IN A RESEARCH STUDY WHICH COMPLEMENTS CAREER OBJECTIVES (WITH A FACULTY MEMBER OR OUTSIDE CAMPUS).
- ❑ LEARN MORE ABOUT PODIATRIC MEDICINE (I.E., SHADOWING, CLASSMATES, ADVISOR, OR COLLEGE WEBSITES).
- ❑ JOIN YOUR SCHOOL'S PRE-PODIATRY SOCIETY IF ONE IS AVAILABLE. OR, JOIN YOUR SCHOOL'S PRE-HEALTH SOCIETY TO LEARN MORE ABOUT CAREERS IN MEDICINE.
- ❑ ATTEND PRE-HEALTH ACTIVITIES, SERVICE OPPORTUNITIES, OR MEETINGS.
- ❑ EXPLORE NON-HEALTH RELATED COMMUNITY SERVICE OPPORTUNITIES THROUGH YOUR SCHOOL OR OTHER NOT-FOR-PROFIT AGENCY. IF POSSIBLE, CONTINUE A FEW SELECT ACTIVITIES THROUGHOUT UNDERGRADUATE CAREER.
- ❑ LOOK INTO PAID OR VOLUNTEER RESEARCH OPPORTUNITIES DURING THE SUMMER MONTH.

UNDERGRADUATE TIMELINE FOR APPLYING TO PODIATRIC MEDICAL COLLEGES

JUNIOR

- ❑ VISIT WWW.DISCOVERPODIATRICMEDICINE.ORG TO LEARN MORE ABOUT CAREERS IN PODIATRIC MEDICINE. SPEAK WITH YOUR PRE-HEALTH ADVISOR TO PLAN COURSEWORK FOR PRE-PODIATRY/PRE-MEDICAL TRACK.
 - ❑ SIGN UP FOR COMMITTEE PROCESS (COMMITTEE LETTER OF RECOMMENDATION) OR LETTER OF RECOMMENDATION SERVICE WITH ADVISOR, FACULTY OR CAREER SERVICES AT YOUR SCHOOL.
 - ❑ MAINTAIN COMPETITIVE GPA.
 - ❑ CONTINUE TO WORK OR VOLUNTEER IN A MEDICAL SETTING. OBTAIN LETTERS OF RECOMMENDATION TO DOCUMENT THE NUMBER OF HOURS YOU HAVE ACQUIRED.
 - ❑ CONTINUE SHADOWING A DPM ON A REGULAR BASIS. ASK FOR A LETTER OF RECOMMENDATION TO BE SENT TO THE SCHOOLS YOU HAVE CHOSEN TO APPLY TO IN AUGUST.
 - ❑ STUDY AND REGISTER FOR MCAT.
 - ❑ TAKE THE MCAT.
 - ❑ VISIT COLLEGES OF PODIATRIC MEDICINE TO WHICH YOU ARE INTERESTED APPLYING. ATTEND OPEN HOUSES, OR OTHER ON-CAMPUS EVENTS. MOST COLLEGES OF PODIATRIC MEDICINE OFFER ONE-ON-ONE ADMISSIONS COUNSELING TO HELP ANSWER QUESTIONS YOU MIGHT HAVE ABOUT APPLYING.
 - ❑ REVIEW AACPM'S COLLEGE INFORMATION BOOK BY VISITING WWW.AACPM.ORG, WHICH INCLUDES DESCRIPTIONS OF ALL OF THE PODIATRIC MEDICAL COLLEGES, ADMISSIONS CRITERIA, MINIMUM ENTRANCE REQUIREMENTS, AND MORE.
 - ❑ LOOK FOR LEADERSHIP OPPORTUNITIES ON AND OF CAMPUS.
 - ❑ DISCUSS PODIATRIC MEDICAL SCHOOLS WITH OTHERS: ADVISORS, PARENTS, UPPER-CLASS STUDENTS, CURRENT PODIATRY STUDENTS AND DPMS.
 - ❑ VISIT AACPM'S WEBSITE AT WWW.AACPM.ORG TO LEARN ABOUT APPLYING TO THE COLLEGES OF PODIATRIC MEDICINE; REVIEW FAQs AND TIPS FOR APPLYING.
 - ❑ RESEARCH SCHOOLS AND REVIEW EACH SCHOOL'S REQUIRED DOCUMENTS EARLY IN THE SPRING SEMESTER.
- ❑ IDENTIFY PROFESSORS AND/OR ADVISORS TO WRITE LETTERS OF RECOMMENDATION (IF NO COMMITTEE EVALUATION IS AVAILABLE); ASK POLITELY FOR LETTERS OF RECOMMENDATION WELL IN ADVANCE OF THE DEADLINES. IT IS OFTEN HELPFUL TO PROVIDE THOSE WRITING YOUR RECOMMENDATIONS WITH INSTRUCTIONS FOR SUBMITTING LETTERS. REMEMBER TO THANK THEM FOR THEIR TIME.
 - ❑ MAKE LIST OF ALL PODIATRIC MEDICAL SCHOOLS TO WHICH YOU PLAN TO APPLY. REMEMBER TO KEEP GOOD RECORDS OF COMMUNICATION WITH EACH SCHOOL'S OFFICE OF ADMISSION.
 - ❑ SCHEDULE A VOLUNTEER OR PAID PRE-PODIATRY ACTIVITY FOR THE SUMMER.

UNDERGRADUATE TIMELINE FOR APPLYING TO PODIATRIC MEDICAL COLLEGES

SUMMER BEFORE
SENIOR YEAR

- APPLY – APPLICATIONS OPEN THE FIRST WEDNESDAY IN AUGUST EACH YEAR TO NEW APPLICANTS. APPLICATIONS AND INSTRUCTIONS FOR APPLYING CAN BE FOUND BY VISITING: [HTTP://PORTAL.AACPMAS.ORG/](http://portal.aacpmas.org/)
- REQUEST OFFICIAL TRANSCRIPTS OF ALL COLLEGE WORK ATTEMPTED.
- REQUEST LETTERS OF RECOMMENDATION TO BE SENT TO THE COLLEGES YOU PLAN TO APPLY TO IN AUGUST.
- TAKE THE MCAT IF YOU HAVE NOT DONE SO ALREADY.
- PREPARE FOR SCHOOL INTERVIEWS IN THE FALL.
- BUDGET TIME AND FINANCES APPROPRIATELY TO ATTEND INTERVIEWS. INTERVIEWS ARE NOT AN ACCEPTABLE REASON TO MISS LECTURES OR LABS. PLAN ACCORDINGLY.
- PARTICIPATE IN A VOLUNTEER OR PAID RESEARCH OPPORTUNITY.

SENIOR

- TAKE THE MCAT IF YOU HAVE NOT DONE SO ALREADY.
- MEET WITH A PRE-HEALTH ADVISOR TO REVIEW COMPLETED COURSEWORK AND PRE-REQUISITES WHICH ARE IN-PROGRESS (IP) OR PLANNED (PL).
- ATTEND INTERVIEWS WITH SCHOOLS.
- VOLUNTEER OR WORK IN A MEDICAL SETTING (I.E., CLINIC, ER, HOSPITAL).
- CONTINUE EXTRACURRICULAR ACTIVITIES AND LEADERSHIP ROLES ON AND OFF CAMPUS.
- ACCEPT AN OFFER AND NOTIFY OTHER SCHOOLS OF YOUR FINAL DECISION IN A TIMELY MANNER.
- WRITE THANK-YOU NOTES TO REFERENCES AND ADMISSION OFFICERS.
- THANK YOUR PRE-MED ADVISOR FOR HIS OR HER ASSISTANCE; APPRISE THEM OF YOUR FINAL DECISION.
- APPLY FOR FEDERAL FINANCIAL AID AND SCHOLARSHIPS FOR WHICH YOU MAY BE ELIGIBLE.

APPLICATION PROCESS

The American Association of Colleges of Podiatric Medicine Application Service (AACPMAS) allows students to apply to all nine of the colleges of podiatric medicine with one online application.

AACPMAS provides a simplified process of applying to the colleges of podiatric medicine. Applicants complete one application and submit it with all official transcripts to the centralized service. AACPMAS verifies the application components for accuracy, calculates the applicant's grade point averages (GPA), and delivers the materials to the podiatric schools and colleges that the applicant designates. AACPMAS may take up to 5 weeks to process applications once materials have been received.

Official transcripts from each college attended must be sent directly to:

AACPMAS APPLICATION SERVICE
P.O. BOX 9200
WATERTOWN, MA 02471

AACPMAS now accepts transcripts sent electronically from Credentials Solutions. To see if your school participates with this service please check this link:

WWW.CREDENTIALS-INC.COM/CGI-BIN/DVCGITP.PGM?ALUMTROLIAISN

If your school does participate please follow the link below:

WWW.TRANSSCRIPTSPLUS.NET/ORDER

APPLICATION FEES

The fee for using AACPMAS is based on a graduated scale that varies according to the number of colleges an individual designates when submitting an application. Applicants may request that AACPMAS send a completed application to more schools for an additional fee. Applicants can pay the application fee with a credit card once they have e-submitted a completed application.

AACPMAS only accepts MasterCard and Visa.

Application materials will not be processed until payment is received.

For the 2020 AACPMAS cycle, the fee for the initial application and first designated college is \$185. An additional \$50 is added for each additional designation at the time of submission. After the initial submission, adding additional programs is \$65 for each additional designation.

AACPMAS begins accepting new applications for admission the first Wednesday in August each year for fall admission the following year. Complete and verified applications will be delivered to the designated schools and colleges of podiatric medicine on a daily basis thereafter until the cycle closes.

Application Deadline:

The final application deadline date is June 30TH of each year for fall admission of the same year.

Applicants should check with each school or college of podiatric medicine for additional information about final deadlines for submitting materials.

LETTERS OF RECOMMENDATION AND STANDARDIZED EXAMS

Letters of recommendation or evaluation will be accepted through AACPMAS via the Letters by Liaison letter service. Some colleges of podiatric medicine will accept letters via outside, confidential letter transmission services (e.g. Interfolio or VirtualEval). Additionally, extraneous materials, (e.g., past achievements, research performed, resumes, diplomas or certificates) can be sent directly to the college(s) designated in the application or brought to the student’s interview.

SCHOOL	STANDARDIZED TESTS ACCEPTED
AZPOD	MCAT LAST MCAT TEST DATE: JANUARY
BUSPM	MCAT LAST MCAT TEST DATE: MAY
CSPM	MCAT LAST MCAT TEST DATE: MAY
DMU-CPMS	MCAT LAST MCAT TEST DATE: MAY
NYCPM	MCAT LAST MCAT TEST DATE: JUNE
KSUCPM	MCAT LAST MCAT TEST DATE: JUNE
SCPM	MCAT LAST MCAT TEST DATE: JUNE
TUSPM	MCAT LAST MCAT TEST DATE: JUNE
WUCPM	MCAT LAST MCAT TEST DATE: JUNE

APPLICANTS TAKE THE MCAT AS AN ENTRANCE REQUIREMENT MUST TAKE THE MCAT NO LATER THAN SPRING OF THE YEAR OF ADMISSION. ALL STANDARDIZED ADMISSIONS EXAMS TAKEN MORE THAN THREE (3) YEARS PRIOR TO APPLICATION ARE NOT ACCEPTABLE.

STUDENTS SHOULD MAKE NOTE OF THEIR AAMC ID NUMBER. THIS INFORMATION IS TRANSMITTED TO THE AACPMAS DURING THE APPLICATION PROCESS.

TO REGISTER FOR THE MCAT AND FOR DATES AND TEST SITE LOCATIONS, VISIT:

WWW.AAMC.ORG/STUDENTS/APPLYING/MCAT/RESERVING/.

TO HAVE OFFICIAL MCAT SCORES SENT TO AACPMAS VISIT:

[HTTPS://SERVICES.AAMC.ORG/MCATTHX/](https://SERVICES.AAMC.ORG/MCATTHX/)

FOR ADDITIONAL INSTRUCTIONS.

To apply now, students should visit:

<http://portal.aacpmas.org>

AACPM ADMISSIONS GUIDELINES

The AACPM encourages each of its member schools and colleges to conduct an application process that is inclusive and professional. The purpose of these traffic rules is to allow prospective students to explore their options within the podiatric medical community, and to give the schools and colleges of podiatric medicine the ability to process, select and matriculate applicants in a fair and timely manner.

Each school or college of podiatric medicine shall publish annually, amend publicly, and adhere to its application, acceptance and admission procedures. Schools or colleges of podiatric medicine may begin extending offers of admission to acceptable candidates any time after the interview. Each school or college’s acceptance deposit shall not exceed \$1000. If the applicant enrolls at the college, the school or college is encouraged to credit the deposit toward tuition. Applicants will be requested to submit any necessary documents, including a deposit, according to the following schedule:

- THROUGH FEBRUARY 28, ALLOW 30 DAYS FOR CANDIDATES TO RESPOND TO OFFERS OF ADMISSION
- BETWEEN MARCH 1 AND MAY 31, ALLOW 14 DAYS FOR CANDIDATES TO RESPOND TO OFFERS OF ADMISSION
- AFTER JUNE 1, CANDIDATES MAY BE ASKED FOR AN IMMEDIATE DEPOSIT.

Applicants are expected to become familiar with admissions requirements, follow application procedures, meet all deadlines at each institution to which they apply and conduct themselves in a professional manner. Additionally, applicants are responsible for the collection and timely submission of letters of evaluation, transcripts, standardized exam scores and applicable fees. Applicants are also responsible for reporting and updating any changes in the initially submitted application (e.g., address, email, academic status and state of residence). Applicants are responsible for responding promptly to all interview invitations and offers of admissions (either to accept or decline). Further, applicants who have made a final decision regarding the podiatric medical school or college they plan to attend have an obligation to promptly withdraw their applications from all other schools. After March 1st, AACPM will promptly begin notifying the podiatric medical schools and colleges the names of candidates who continue to hold one or more deposits at other schools or programs.

AACPMAS reviews the applicant’s application form for completion, verifies academic coursework, receives official standardized admissions test scores, and processes payment of application fees. AACPMAS then electronically transmits applicant’s data to the colleges selected by the applicant. There are no secondary application forms or fees for the schools and colleges of podiatric medicine.

AACPM is responsible for providing fair and equitable treatment throughout the application process.

Please refer to the aacpm.org web site for a printable copy of the AACPMAS Traffic Rules.

AACPM DOES NOT SELL OR OTHERWISE RELEASE ADDRESSES, EMAILS, PHONE NUMBERS OR OTHER CONTACT INFORMATION ABOUT APPLICANTS TO COMMERCIAL VENDORS OR RESEARCHERS WHO ARE OUTSIDE AACPM OR OUR MEMBER INSTITUTIONS.

There are no secondary application forms or fees for the schools and colleges of podiatric medicine.

TIPS FOR APPLYING – GUIDANCE FROM THE ADMISSIONS ADVISOR:

GET ORGANIZED

- COUNSEL STUDENTS TO GATHER ALL WORK, VOLUNTEER, AND HEALTH CARE EXPERIENCE INTO A DESCRIPTIVE TIMELINE. ENCOURAGE STUDENTS TO KEEP RECORDS OF CONTACT INFORMATION OF THOSE SPECIFIC EXPERIENCES AS WELL.
- ADVISE STUDENTS TO KEEP METICULOUS RECORDS OF EXTRACURRICULAR ACTIVITIES, SCHOLASTIC AWARDS, SCHOLARSHIPS.
- ENCOURAGE STUDENTS TO MAINTAIN A DETAILED RECORD OF THEIR COMMUNICATION WITH EACH DESIGNATED COLLEGE; THIS IS SO THEY CAN KEEP TRACK OF DATES, SUBMITTED INFORMATION AND CONTACTS AT EACH COLLEGE OF PODIATRIC MEDICINE.

WHEN APPLYING

- STUDENTS SHOULD MAKE NOTE OF THEIR AAMC ID NUMBER WHEN REGISTERING FOR THE MCAT. THIS INFORMATION IS TRANSMITTED TO THE AACPMAS DURING THE APPLICATION PROCESS.
- ADDITIONAL AND MORE TECHNICAL APPLICATION SUBMISSION FAQs CAN BE FOUND BY VISITING [HTTPS://PORTAL.AACPMAS.ORG/](https://portal.aacpmas.org/).

UNDERSTANDING THE PREREQUISITES

- THE PREREQUISITE COURSES LISTED IN THIS GUIDE AND ON THE INDIVIDUAL COLLEGES OF PODIATRIC MEDICINE WEBSITES ARE MEANT TO BE A GUIDELINE FOR THE MINIMUM NUMBER OF COURSES STUDENTS SHOULD COMPLETE IN EACH SUBJECT AREA – IT IS BENEFICIAL TO COMPLETE MORE THAN THE MINIMUM REQUIRED HOURS.
- BEFORE TAKING ANY PREREQUISITE COURSEWORK ONLINE, STUDENTS SHOULD CONTACT THE SCHOOL OR COLLEGE OF PODIATRIC MEDICINE DIRECTLY TO DETERMINE WHAT WILL SATISFY THE PREREQUISITE.
- PREREQUISITE COURSES TAKEN AT AN ACCREDITED JUNIOR OR COMMUNITY COLLEGE MAY FULFILL ADMISSIONS REQUIREMENTS. APPLICANTS SHOULD CHECK WITH EACH COLLEGE FOR SPECIFIC AND DETAILED INFORMATION PERTAINING TO EACH COURSE.
- WHEN COMPLETING THE AACPMAS COURSEWORK SECTION, IMPROPERLY LABELED COURSES COULD SIGNIFICANTLY AFFECT A STUDENT’S GPA.

WRITING A PERSONAL STATEMENT

- PERSONAL STATEMENTS SHOULD BE A GENERAL STATEMENT INDICATING THE STUDENT’S DEVELOPMENT FOR A CAREER IN THE PODIATRIC MEDICAL PROFESSION, NOT DIRECTED AT A SPECIFIC SCHOOL.
- PERSONAL STATEMENTS SHOULD BE CHECKED FOR SPELLING AND GRAMMAR PRIOR TO SUBMITTING. CHANGES FOR CONTENT REVISIONS OR TYPOGRAPHICAL ERRORS ARE NOT ALLOWED AFTER THE APPLICATION IS SUBMITTED.
- ENCOURAGE STUDENTS TO HAVE AT LEAST ONE OTHER PERSON READ THE PERSONAL STATEMENT; SEEK HELP FROM THE COLLEGE’S WRITING CENTER, OR ATTEND A WORKSHOP ON WRITING A PERSONAL STATEMENT.
- USUALLY, IT IS ACCEPTABLE TO WRITE ABOUT AN INTERNSHIP EXPERIENCE AT ONE OF THE COLLEGES OF PODIATRIC MEDICINE IN THE PERSONAL STATEMENT. THE ADMISSIONS COMMITTEE IS MAINLY INTERESTED IN HOW YOU OBTAINED KNOWLEDGE OF THE PROFESSION AND YOUR INSIGHT FROM THE EXPERIENCE.

BACCALAUREATE DEGREES

- GENERALLY SPEAKING, A BACCALAUREATE DEGREE IS NOT A PRE-REQUISITE FOR ACCEPTANCE INTO A COLLEGE OF PODIATRIC MEDICINE.
- IF A STUDENT IS PLANNING TO MATRICULATE TO A DPM PROGRAM AFTER COMPLETION OF ONLY 90 SEMESTER HOURS OF UNDERGRADUATE COURSEWORK, IT IS IMPORTANT TO DETERMINE – IN ADVANCE – IF THEY WILL BE ELIGIBLE FOR A BACHELOR’S DEGREE AT THE COLLEGE OF PODIATRIC MEDICINE. MOST SCHOOLS AND COLLEGES OF PODIATRIC MEDICINE ARE NOT UNDERGRADUATE-DEGREE GRANTING INSTITUTIONS; THEREFORE THEY ARE UNABLE TO AWARD A BACCALAUREATE DEGREE UPON COMPLETION OF THE FIRST YEAR OF DPM COURSEWORK IN THEIR PROGRAM.

FREQUENTLY ASKED QUESTIONS

Q: A STUDENT APPLIED LAST YEAR AND IS NOW REAPPLYING. CAN APPLICATIONS FROM LAST YEAR BE RE-SUBMITTED?

A: IF YOU APPLIED TO AACPMAS IN THE PREVIOUS CYCLE, YOU CAN COPY DATA FROM YOUR PREVIOUS APPLICATION. JUST LOG IN TO AACPMAS WITH THE SAME USERNAME AND PASSWORD FROM THAT CYCLE AND YOU WILL BE WALKED THROUGH THE RE-APPLICANT PROCESS. IF YOU CREATE A NEW ACCOUNT USING A NEW EMAIL ADDRESS, YOU WILL NOT BE PROMPTED TO COPY DATA FROM THE PAST APPLICATION.

Q: IS SHADOWING A DPM REQUIRED TO APPLY?

A: IT IS COMMONLY ACCEPTED THAT STUDENTS SHOULD BE KNOWLEDGEABLE ABOUT THE PODIATRIC MEDICAL PROFESSION PRIOR TO APPLYING; MOST STUDENTS WILL GAIN KNOWLEDGE OF THE PRACTICE OF PODIATRIC MEDICINE THROUGH THE ACT OF SHADOWING. IN MANY CASES, STUDENTS WILL BE ASKED TO SUBMIT A LETTER OF RECOMMENDATION FROM A PRACTICING DPM PRIOR TO MATRICULATING. STUDENTS WILL WANT TO CHECK WITH THE INDIVIDUAL SCHOOLS AND COLLEGES FOR EXACT REQUIREMENTS AND MINIMUM ACCEPTABLE HOURS.

Q: CAN STUDENTS APPLY TO OTHER HEALTH DISCIPLINES SCHOOLS WHILE APPLYING TO THE COLLEGES OF PODIATRIC MEDICINE?

A: YES, STUDENTS MAY HAVE APPLICATIONS TO MULTIPLE HEALTH DISCIPLINES SCHOOLS SUBMITTED AT THE SAME TIME. THE APPLICATION PROCESSES ARE SIMILAR, IN SOME CASES, BUT INDEPENDENT OF EACH OTHER. PLEASE REVIEW THE AACPMAS INSTRUCTIONS BEGINNING ON PAGE 35 CAREFULLY AND MAKE SURE THAT YOU HAVE COMPLETED EACH STEP. DON’T FORGET TO INCLUDE THE REASONS THAT YOU WANT TO STUDY PODIATRIC MEDICINE IN YOUR PERSONAL STATEMENT, AND DURING YOUR INTERVIEW.

Q: WHEN ADVISING STUDENTS INTO POST-BACCALAUREATE PROGRAMS VERSES GRADUATE SCIENCE STUDY, DO THE COLLEGES OF PODIATRIC MEDICINE PREFER ONE FORM OF PREPARATION OVER THE OTHER?

A: IN MOST INSTANCES, IT WILL DEPEND ON THE SITUATION. STUDENTS WHO ARE IN NEED OF ACADEMIC PREPARATION MAY BENEFIT FROM POST-BACCALAUREATE STUDY; STUDENTS IN NEED OF ACADEMIC REMEDIATION MAY HAVE MORE OPPORTUNITY TO DEMONSTRATE ACTUAL ABILITY THROUGH GRADUATE SCIENCE PROGRAMS DESIGNED TO ENHANCE THE ACADEMIC RECORD.

Q: WHERE SHOULD TRANSCRIPTS BE SENT, AND ARE THERE FORMS THAT MUST ACCOMPANY THE TRANSCRIPTS?

A: THE INSTITUTIONS ATTENDED SECTION OF THE AACPMAS APPLICATION ALLOWS STUDENTS TO PRINT TRANSCRIPT REQUEST FORMS. AACPMAS STRONGLY RECOMMENDS THAT STUDENTS PRINT AND ADVISE THEIR REGISTRAR’S OFFICE TO ATTACH A TRANSCRIPT REQUEST FORM TO THE OFFICIAL TRANSCRIPT. THIS FORM HELPS AACPMAS PROPERLY MATCH THE OFFICIAL TRANSCRIPTS TO THE AACPMAS APPLICATION. IF THE STUDENT’S CURRENT NAME IS DIFFERENT FROM THE NAME LISTED ON THE TRANSCRIPT, THEY MUST INCLUDE BOTH THE CURRENT AND FORMER NAME ON THE TRANSCRIPT REQUEST FORM. TRANSCRIPTS MUST BE SENT DIRECTLY FROM THE REGISTRAR’S OFFICE. PLEASE DIRECT THE OFFICE OF REGISTRARS TO SEND OFFICIAL TRANSCRIPTS TO THE FOLLOWING ADDRESS:

**AACPMAS TRANSCRIPT PROCESSING CENTER
P.O. BOX 9200
WATERTOWN, MA 02471**

AACPMAS NOW ACCEPTS TRANSCRIPTS SENT ELECTRONICALLY FROM CREDENTIALS SOLUTIONS. PLEASE REFER TO PAGE 35 FOR ONLINE INFORMATION.

Q: CAN I WRITE A LETTER OF RECOMMENDATION FOR A STUDENT, AND WILL THIS BE SUBSTITUTED FOR A FACULTY LETTER?

A: IN MOST CASES, WHEN A COMMITTEE LETTER IS NOT AVAILABLE, A LETTER FROM THE STUDENT’S PRE-HEALTH ADVISOR IS AN ACCEPTABLE SUBSTITUTE FOR ONE NON-SCIENCE, FACULTY LETTER OF RECOMMENDATION.

Q: A STUDENT PREVIOUSLY APPLIED TO MD AND/OR DO PROGRAMS. CAN LETTERS OF RECOMMENDATION (OR A COMMITTEE EVALUATION) BE RE-USED FOR THE DPM APPLICATION?

A: STUDENTS PURSUING ENTRY INTO ONE OF THE NINE COLLEGES OF PODIATRIC MEDICINE ARE CONSIDERED TO BE “PRE-MEDICAL” STUDENTS; ACCEPTABLE LETTERS OF RECOMMENDATION OFTEN ADDRESS STUDENTS’ PREPAREDNESS FOR A CAREER IN MEDICINE. STUDENTS SHOULD BE ENCOURAGED TO SUBMIT ADDITIONAL LETTERS OF RECOMMENDATION THAT ADDRESS THEIR RECENT PREPARATION FOR A CAREER IN PODIATRIC MEDICINE.

Q: ARE AP CREDITS ACCEPTED FOR PRE-REQUISITE COURSES AT THE COLLEGES OF PODIATRIC MEDICINE?

A: IN MOST CASES, YES. STUDENTS SHOULD CHECK WITH EACH SCHOOL OR COLLEGE TO SEE WHICH AP CREDITS ARE ACCEPTED.

FINANCIAL AID AND SCHOLARSHIPS

Many forms of financial aid are available to podiatric medical students, including scholarships and loans. Some financial aid is available directly from the colleges, and many state, local and national podiatric medical organizations offer scholarships or loans to students. Financial aid officers at the schools and colleges of podiatric medicine will have more information.

FEDERAL PROGRAMS

Podiatric medical students may be eligible for a number of federal loan programs. To be eligible for Federal financial aid, the student must:

- BE AN ENROLLED STUDENT ATTENDING AT LEAST HALF TIME.
- BE A CITIZEN OF THE UNITED STATES, OR A PERMANENT RESIDENT WITH THE APPROPRIATE DOCUMENTED AUTHORIZATION FROM THE U.S. IMMIGRATION SERVICE.
- NOT BE IN DEFAULT OR OWE A REFUND ON ANY U.S. DEPARTMENT OF EDUCATION TITLE IV GRANT OR EDUCATIONAL LOAN, AND PROVIDE WRITTEN CERTIFICATION OF THAT FACT.
- HAVE FINANCIAL NEED AS DETERMINED BY AN APPROVED NEEDS ANALYSIS SYSTEM.
- MAINTAIN SATISFACTORY ACADEMIC PROGRESS.
- FILE A STATEMENT OF EDUCATIONAL PURPOSE STATING THAT ALL FINANCIAL AID FUNDS RECEIVED WILL BE USED FOR EDUCATIONAL PURPOSES.
- FILE A STATEMENT OF SELECTIVE SERVICE REGISTRATION STATUS TO INDICATE COMPLIANCE WITH SELECTIVE SERVICE REGULATION.
- COMPLETE A STUDENT LOAN ENTRANCE INTERVIEW.
- COMPLETE A STUDENT LOAN EXIT INTERVIEW CONDUCTED BY THE FINANCIAL AID OFFICE AT THE TIME THE STUDENT GRADUATES AND/OR CEASES TO BE A STUDENT.

For more information about any of the federal loan programs visit:

WWW.STUDENTAID.ED.GOV

- SUBSIDIZED STAFFORD/DIRECT LENDING PROGRAM
- UNSUBSIDIZED STAFFORD/DIRECT LENDING PROGRAM
- FEDERAL COLLEGE WORK STUDY HEALTH
- PROFESSIONS STUDENT LOANS

Encourage students to apply for federal funding via the Free Application for Federal Student Aid:

WWW.FAFSA.ED.GOV

SCHOLARSHIPS

Many private scholarships have a financial need requirement; in most instances, students will need to file a Free Application for Federal Student Aid (FAFSA) with the government so that their need can be determined.

Organizations such as the American Podiatric Medical Association (APMA), the American Association of Women Podiatrists (AAWP), and the Podiatry Insurance Company of America (PICA) are just a few examples of agencies providing scholarships to students.

INDIAN HEALTH SERVICE SCHOLARSHIPS:

Native Americans and Alaskan Natives are eligible to apply for an Indian Health Service Scholarship. The purpose of the IHSS is to provide an incentive for Native people to seek education in the health fields, and ensure that Native people will ultimately serve their tribal communities, whether on reservations or in urban Indian health clinics. A service commitment is required for scholarship participation.

For more information and to obtain an application, contact:

INDIAN HEALTH SERVICE SCHOLARSHIP
TWINBROOK METRO PLAZA - GRANT MANAGEMENT BRANCH
12300 TWINBROOK PARKWAY SUITE 100
ROCKVILLE, MD 20852
301-443-6197

SCHOLARSHIPS FOR DISADVANTAGED STUDENTS:

The Scholarships for Disadvantaged Students program provides grant assistance to needy students who are determined to be educationally or economically disadvantaged. Students must supply complete parental financial data on their Free Application for Federal Student Aid to be considered.

Funding is dependent on federal appropriations, and the amount available at each college varies per year. The Financial Aid Office, or a special committee at the institution, selects the recipients. Students should contact the Financial Aid Office at the institution they plan to attend for more information.

ARMED FORCES HEALTH PROFESSIONS SCHOLARSHIP PROGRAM (HPSP) AND HEALTH SERVICES COLLEGIATE PROGRAM (HSCP)

The Department of Defense offers funding for a wide range of podiatric medical educational expenses in exchange for an active duty military service commitment. Applications are handled by local area military recruiters. Prospective applicants should meet with a Navy recruiter for more information. They may also want to speak with current Navy podiatric physicians who can provide a fuller perspective on the practice of military medicine.

NAVY HSPS AND HSCP:

WWW.NAVY.COM/NAVY/CAREERS/HEALTHCARE/CLINICAL-CARE/PODIATRY

NAVY RECRUITING COMMAND
5722 INTEGRITY DR., BLDG. 784
MILLINGTON, TN 38054-5057
800-USA-NAVY

INTERNATIONAL APPLICANTS

An international student is a native of a foreign country and plans to study in the U.S. on a student visa. International applicants are eligible for admission to select U.S. colleges of podiatric medicine, if they meet the minimum admission standards. For restrictions and requirements, please see the individual college descriptions. Admission requirements for international students will be posted by each college of podiatric medicine. However, most schools and colleges of podiatric medicine require international students to complete all the application materials mandated for U.S. citizens and permanent residents.

In addition, international students may be asked to take the Test of English as a Foreign Language (TOEFL) or demonstrate English language proficiency. International students should expect to finance the entire cost of their podiatric medical education; they should also be prepared to show evidence of funding prior to being issued the appropriate travel documents.

Applicants who have completed coursework outside the U.S. (except through study abroad) should supply their official foreign transcripts to an approved foreign transcript evaluation service for a course-by-course U.S. equivalency report. They must arrange for the foreign transcript reports to be sent directly to AACPMAS from the foreign transcript evaluation agency. Contact the foreign transcript evaluation service as early as possible. The services may take several weeks to process a foreign transcript, once it is received.

INTERNATIONAL APPLICANTS (CONTINUED)

Official copies of foreign transcripts should not be sent to AACPMAS. AACPMAS only accepts the official foreign credential evaluation. Applicants should check with each designated program for further instruction for submitting documentation of foreign coursework.

International students should be mindful that obtaining a residency program in the U.S. is challenging for some graduates. Many hospitals do not wish to accept the legal responsibility of sponsoring podiatric physicians for their graduate medical education (residency) programs. Each school or college of podiatric medicine accepting international students provides them with adequate graduate placement counseling; however, the student still bears the responsibility to procure a U.S. residency. Additional resources and information can be found by visiting WWW.AACPM.ORG/RESIDENCIES

It is strongly recommended that international students begin researching graduate medical education programs as early as possible to determine which residency programs of interest will sponsor them. International students should begin the process as early as the first year of study.

Please note, students who have permanent residency status in the U.S. are not considered international students; they have the same rights, responsibilities, and options as U.S. citizens applying for admission to college of podiatric medical and residency.

Below is a list of suggested services for the translation and review of foreign transcripts; however, check with your designated programs for final approval.

WORLD EDUCATION SERVICES
BOWLING GREEN STATION
P.O. BOX 5087
NEW YORK, NY 10274-5087
212-966-6311
WWW.WES.ORG

JOSEF SILNY & ASSOCIATES, INC.
7101 SW 102 AVE.
MIAMI, FL 33173
305-273-1616
WWW.JSILNY.COM

EDUCATION CREDENTIAL EVALUATORS
PO BOX 514070
MILWAUKEE, WI 53203-3470
414-289-3400
WWW.ECE.ORG

SPECIAL TOPICS

ADVANCED STANDING APPLICATIONS OR TRANSFER APPLICATIONS

Advanced standing is a designation reserved for a candidate who is exempted from certain first-year, basic science courses or is accepted as a second- or third-year student. Advanced standing is offered at the time of admission to candidates who have mastered some aspect of the podiatric medical school curriculum due to prior training.

Some colleges of podiatric medicine may also offer advanced standing to students who have been granted transfer admission from another U.S. podiatry school. In these cases, applicants may be allowed to enter as first- or second-year students with a modified schedule.

Each college of podiatric medicine has its own policy on advanced standing and transferring students. Individuals inquiring about a special admission should contact the college's office of admission for specific details. It is significant to know that most students do not obtain advanced standing and that very few students transfer from one school to another.

COMBINED AND DUAL DEGREE PROGRAMS

Individuals enrolling in a school or college of podiatric medicine may be eligible to enroll in a combined or dual degree program leading to a professional credential in business, health administration, public health, or health education. Some colleges offer graduate, science education designed to help students enhance their careers in podiatric medicine – options range from scientific research to academic medicine to biomedical studies. These options allow students to combine their clinical skills and abilities with knowledge gained in graduate, professional programs.

For a complete description of dual degree and combined degree study, please see the individual college descriptions. For admissions information into one of these programs, consult the appropriate office of admission.

CRIMINAL BACKGROUND CHECK AND FINGERPRINTING

In recent years, many state legislatures have passed bills obligating institutions to conduct criminal background checks for matriculating medical students, inclusive of podiatric medical students. Additionally, affiliated hospitals and clinical training locations have enacted policies requiring criminal background checks for medical students, including podiatric medical students, completing clinical rotations at their facilities. Currently, the Department of Veterans Affairs mandates that all medical students, including podiatric medical students, involved in patient care at its hospitals be subject to criminal background checks.

While a criminal background check is not part of the AACPMAS application for the 2019 cycle, all podiatric medical schools require criminal background checks of all matriculating students and again prior to the start of clinical rotations.

It is the student's responsibility to become knowledgeable about what will be required of him or her during the application process.

When an individual completes the AACPMAS application process, the applicant will be asked to disclose information regarding prior criminal offenses. Failure to truthfully disclose such offenses on the AACPMAS application may result in an offer of admission being rescinded; if the omission is discovered after enrollment in podiatric medical school, the student may be subjected to disciplinary actions, up to and including dismissal.

DIVERSITY

Podiatric medicine embraces a multitude of diverse students and practicing podiatric physicians. Nearly 33% of students currently enrolled in a college of podiatric medicine self-report identifying as a student of color, while nearly 10% of practicing, podiatric physicians are under-represented minorities². The colleges of podiatric medicine actively recruit students from all ethnic backgrounds, races and genders. AACPMAS, its parent organization, AACPM, and the colleges adhere to all legal requirements, including the Americans with Disabilities Act.

NON-TRADITIONAL STUDENTS

The podiatric medical profession has a venerable tradition of assisting mature and second-career students into study and practice. The podiatric medical colleges and AACPM welcome admission inquiries from individuals trained in other health disciplines. In most cases, these individuals must complete the entire curriculum at an accredited podiatric medical school and they must complete a residency. It is up to the individual school or college to determine if credit for prior course work will be awarded. Contact the admissions department at a college for specific information.

² UNPUBLISHED APMA DATA FROM 2010.

RESOURCES

AMERICAN ASSOCIATION OF COLLEGES OF
PODIATRIC MEDICINE
15850 CRABBS BRANCH WAY, SUITE 320
ROCKVILLE, MD 20855
301-948-0957
PODINFO@AACPM.ORG
WWW.AACPM.ORG

 [Facebook.com/AACPM](https://www.facebook.com/AACPM)

 [@PodMedColleges](https://twitter.com/PodMedColleges)

 [@PodMedColleges](https://www.instagram.com/PodMedColleges)

**FOLLOW THESE AND MORE STORIES ONLINE AT
#I CHOOSE PODIATRY AND #DISCOVER PODIATRIC MEDICINE**

AACPMAS APPLICATION SERVICE
P.O. BOX 9200
WATERTOWN, MA 02471
617-612-2900
[HTTPS://PORTAL.AACPMAS.ORG/](https://portal.aacpmas.org/)

AMERICAN PODIATRIC MEDICAL ASSOCIATION
9312 OLD GEORGETOWN ROAD
BETHESDA, MD 20814-1621
301-581-9200
WWW.APMA.ORG

AMERICAN COLLEGE OF FOOT AND ANKLE SURGEONS
8725 WEST HIGGINS RD. STE 555, CHICAGO, IL 60631
PHONE: (773) 693-9300
WWW.ACFAS.ORG

THE AMERICAN COLLEGE OF FOOT AND ANKLE ORTHOPEDICS
AND MEDICINE
5272 RIVER ROAD, SUITE 500
BETHESDA, MD 20816
800-265-8263
WWW.ACFAOM.ORG

AMERICAN BOARD OF FOOT AND ANKLE SURGERY
445 FILLMORE STREET
SAN FRANCISCO, CALIFORNIA 94117
415-553-7800
WWW.ABFAS.ORG

THE AMERICAN BOARD OF PODIATRIC MEDICINE
1060 AVIATION BLVD. #100
HERMOSA BEACH, CA 90254
(310) 375-0700
WWW.ABPMED.ORG

BUREAU OF LABOR STATISTICS
WWW.BLS.GOV

COUNCIL ON PODIATRIC MEDICAL EDUCATION
9312 OLD GEORGETOWN ROAD
BETHESDA, MD 20814-1621
301-581-9200
WWW.CPME.ORG

EDUCATIONAL CREDENTIAL EVALUATORS
PO BOX 514070
MILWAUKEE, WI 53203-3470
414-289-3400
WWW.ECE.ORG

FREE APPLICATION FOR FEDERAL FINANCIAL AID
WWW.FAFSA.ED.GOV

JOSEF SILNY & ASSOCIATES, INC.
7101 SW 102 AVE.
MIAMI, FL 33173
305-273-1616
WWW.JSILNY.COM

NATIONAL INSTITUTES OF HEALTH
9000 ROCKVILLE PIKE
BETHESDA, MARYLAND 20892
WWW.NIH.ORG

NATIONAL STUDENT LOAN DATA SYSTEM
[HTTP://WWW.NSLDS.ED.GOV/NSLDS_SA/](http://WWW.NSLDS.ED.GOV/NSLDS_SA/)

U.S. DEPARTMENT OF EDUCATION
400 MARYLAND AVENUE, SW
WASHINGTON, D.C. 20202
1-800-USA-LEARN (1-800-872-5327)
WWW.ED.GOV

WORLD EDUCATION SERVICES
BOWLING GREEN STATION

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The AACPM wishes to thank the APMA for permission to reprint two outstanding demonstrations of the work done by DPMs in the Today's Podiatrist Profiles.

Additionally, the AACPM would like to thank its member schools and colleges as well as students for photo contributions.



AMERICAN ASSOCIATION OF
COLLEGES OF
PODIATRIC MEDICINE

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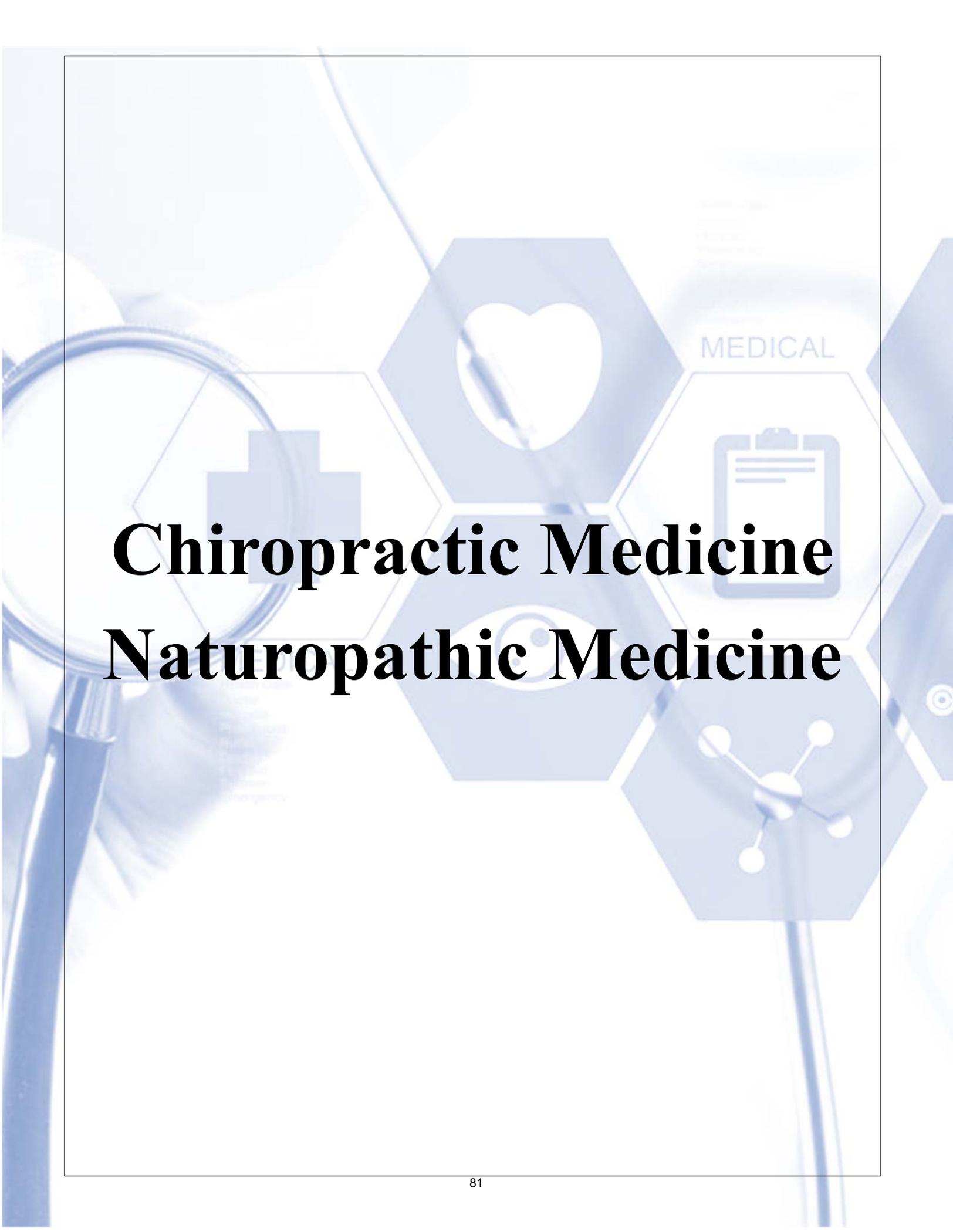
The College Information Book is printed bi-annually by the American Association of Colleges of Podiatric Medicine (AACPM). The material in this book is compiled from information submitted by each of the member colleges. The information presented is not a contract and creates no obligation on either party. Although AACPM has made every effort to verify the accuracy of the data submitted by the member colleges, AACPM cannot guarantee the accuracy of the data and, as such, the information in this book is provided to you as a reference. AACPM assumes no responsibility, and shall not be liable for damages of any kind whatsoever based upon individual use or reliance on the information provided in this book. Data on tuition and fees are reported by the colleges applicable as of May 1, 2019, and are subject to change. Enrollment projections are reported by the colleges and also are subject to change.

BIBLIOGRAPHY

Carls, G. S., Gibson, T. B., Driver, V. R., Wrobel, J. S., Garoufalis, M. G., DeFrancis, R. R., . . . Christina, J.R. (2011). The Economic Value of Specialized Lower-Extremity Medical Care by Podiatric Physicians in the Treatment of Diabetic Foot Ulcers. *Journal of the American Podiatric Medical Association*, 93-115.

Dorsey, E. R., Jarjoura, D., & Rutecki, G. W. (2003). Influence of Controllable Lifestyle on Recent Trends in Specialty Choice by US Medical Students. *The Journal of the American Medical Association*, 1173-1178.

Wing, P., Forte, G. J., Dionne, M. G., & Christina, J. R. (2008). Projections of the Supply of and Demand for Podiatric Physicians in the United States, 2005 to 2030. *Journal of the American Podiatric Medical Association*, 330-336.

The background is a light blue gradient with various medical icons and text. A magnifying glass is on the left. A syringe is in the center, with a heart shape cut out of its barrel. To the right, there's a clipboard icon and the word 'MEDICAL'. At the bottom right, there's a molecular structure icon. The text 'Chiropractic Medicine' and 'Naturopathic Medicine' is centered in a bold, black font.

Chiropractic Medicine

Naturopathic Medicine

NAAHP Fact Sheet for Health Professions Advisors

Chiropractic



General Description

Chiropractors are primary care professionals and can play a vital, life-changing role. Chiropractic uses a wide variety of techniques and approaches to relieve pain, increase mobility and optimize performance through safe and effective spinal adjustments and manipulation. Doctors of chiropractic are known for healing with a human touch. CareerCast.com ranked chiropractic as the 28th best career in 2018.

What are some common daily activities/experiences?

Doctors of Chiropractic work one-on-one with patients, helping them improve their overall health and find relief from headaches, back, neck and joint pain, without reliance on drugs or surgery. Chiropractors often care for entire families and develop close relationships over time, which makes chiropractic a deeply fulfilling profession. Many chiropractors are in business for themselves or working in a group practice or hospital setting, including the VA.

If you enjoy serving and caring for people chiropractic is a very rewarding profession. One can be one's own boss. Over 40% of doctors of chiropractic are self-employed individuals who own their own clinic. A practicing clinician might have hospital privileges (6.9% do according to a 2009 study), or they might work in a military practice or the VA. Almost 40% practice in a city, 24.7% in a suburb, and 20.4% in a small town.

What are 3-5 personal characteristics important for happiness and success in your profession?

- Communication skills - patient education is an important aspect of chiropractic.
- Independent, leader, self-starter – build and maintain independent practice and patient base.
- An open mind to complementary and alternative medicine.

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- What is my personal philosophy or definition of health?
- Would I like to join a healing profession that makes a difference everyday helping patients improve their health and quality of life?
- Is a conservative natural approach to healthcare appealing to me and my approach to caring about future patients?
- Is the approach that the human body has the innate ability to heal itself something that resonates with me, and an approach I wish to incorporate into my health care practice?
- Chiropractic education and practice ranges widely from focused spinal health specialists to very broadly trained primary care practitioners with a focus on wellness rather than disease. Where do I fall on this spectrum, and which chiropractic programs will be a good fit for me?
- Do you want to specialize in your chiropractic career? Many chiropractic programs also offer dual degrees or certifications to allow for specialization in areas such as Sports Performance, Nutrition, Radiology, Acupuncture & Oriental Medicine, and more.

Preparing for Admission:

- Prerequisite coursework: Admitted students must complete a minimum of 90 semester hours of undergraduate study at an accredited US institution(s) or an equivalent foreign agency with a GPA for these 90 hours of not less than 3.0 on a 4.0 scale. However, it should be noted that some states require an earned Bachelor's degree to obtain licensure. The 90 hours must include a minimum of

NAAHP Fact Sheet for Health Professions Advisors

Chiropractic

24 semester hours in life and physical science courses. Specific course requirements vary by program – be sure to check individual program websites. Most include:

- Biological Sciences with lab
- Chemistry with lab
- Physics with lab
- English Communication / Language
- Psychology
- Social Sciences or Humanities
- See www.chirocolleges.org/prospective_students.html for more information, or prerequisite chart here: www.discoverchiropractic.org/pdf/prerequisites.pdf
- Standardized Tests: none
- Experience/Exposure: Exposure to health care settings, especially chiropractic is strongly recommended. Many chiropractic schools can help match pre-chiropractic students with one of their practicing alumni for shadowing experience upon request.
- Letters of Recommendation: to be submitted directly to individual chiropractic colleges.
- Resources for researching schools: There are currently 22 Doctor of Chiropractic (DC) programs, 18 in the USA and 4 in Canada, New Zealand, and Korea:
 - Association of Chiropractic Colleges List of member institutions: www.chirocolleges.org/members.html
 - Discover Chiropractic Map of programs: www.discoverchiropractic.org/map.html#.Vx-zyfkrJpg

The Admissions Cycle:

- Apply directly to chiropractic colleges.
- Application opens: Multiple start dates and some rolling admissions; research schools directly. Application cycles and deadlines vary by individual program. Several programs have rolling admissions and multiple start dates. It is recommended that students apply ~6 months before intended matriculation date.

The Admissions Process:

- Total number of first year students: Approximately 2,500 students
- Data on applicants and accepted students :
 - Schools' minority students ratios ranged from 11-40%
 - Gender ratios ranged from 50%/50% to 65%/35% male/female.
 - The rising number of minorities and the number of female students continues an increasing trend in chiropractic enrollment.
 - More than 13% held Masters, Doctorates or other advanced degrees.
- Total number of students: ~10,000 students in the United States

Learn More about the Profession

Training & Career Opportunities

- Number of years: four
- Degree attained: Doctor of Chiropractic (DC)
- Total number of graduates in most recent academic year: Approximately 2,500 students

Key Resources for Students

- www.chirocolleges.org/prospective_students.html
- www.discoverchiropractic.org

NAAHP Fact Sheet for Health Professions Advisors

Chiropractic

Key Resources for Advisors

- [NAAHP-Net Focus on Chiropractic: November 2017](#)
- [NAAHP-Net Focus on Chiropractic: December 2015](#)
- [The Advisor Special Edition: Chiropractic: December 2014](#)

Social Media

- None provided

Advisory Council Professional Association Partner Information

Association of Chiropractic Colleges: www.chirocolleges.org

Mission

The Association of Chiropractic Colleges primarily represents accredited chiropractic colleges in North America and seeks to advance chiropractic education, research and service. ACC values evidence-informed, quality, patient-centered care, by expert, ethical, inclusive professionals, and the improvement of health care systems through chiropractic education and research.

Size of organization, Number of member institutions

21 member institutions/campuses

New institutional members in last two years

One new US institution opened in Florida that will go through the accreditation process over the next four years. Several new dual degree program options.

Advisory Council Contact Information

David O'Bryon, ACC President
4424 Montgomery Avenue, Suite 202
Bethesda, Maryland 20814
obryonco@aol.com
Info@ChiroColleges.org
800.284.1062

NAAHP liaison and contact information

Amanda Siglin, Ph.D.
Director, Health Professions Program
Juniata College
1700 Moore St
Huntingdon, PA 16648
siglina@juniata.edu
814-641-3574

Updated: January 2018

For more information on many health professions, we recommend the NAAHP publication, [Health Professions Admission Guide: Strategies for Success](#), available on the NAAHP website.

CHIROPRACTIC (D.C.) ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

According to the American Chiropractic Association, chiropractic is a branch of the healing arts, which is concerned with human health and disease processes. Because of the emphasis on holistic care, chiropractic is associated with the field of alternative medicine. Chiropractors, also known as doctors of chiropractic medicine or chiropractic physicians, diagnose and treat patients whose health problems are associated with the body's muscular, nervous, and skeletal systems, especially the spine. Chiropractors believe by making adjustments to these systems & the spine, patient's health can be improved and preserved. They practice knowing that spinal dysfunction and skeletal imbalance affect many important parts of the body, like the nervous system, and if untreated can lead to pain. Chiropractic is a drug-free, non-surgical science; although they will refer patients for such services if medically necessary.

Chiropractic care of back, neck, extremities, and other joint damage has become more accepted as a result of recent research and changing attitudes. Chiropractors can specialize in specific areas of chiropractic care, including orthopedics, radiology & diagnostic imaging, sports chiropractic, pediatrics, occupational injuries or nutritional consultation. In chiropractic, as in other types of independent practice, earnings are relatively low in the beginning, but increase as the practice grows. Most chiropractors are in solo practice, although some are in group practice or work for other chiropractors. According to the U.S. Department of Labor, the mean annual wage of chiropractors, in 2013, was \$78,410.

ACADEMIC PREPARATION

Students should *carefully consider their motivation and preparation for this career*. Chiropractic programs are looking for an academic record that indicates the aptitude and knowledge base needed to successfully complete the Chiropractic school curriculum.

Pre-Chiropractic students are able to choose a major in **any discipline** provided they successfully complete all prerequisite coursework. The most common undergraduate majors among accepted applicants include exercise science, biology, kinesiology, and psychology. In selecting a college major, students should consider how they will satisfactorily complete the prerequisite courses for the designated programs in addition to the college/university's degree and major requirements.

COURSE REQUIREMENTS

The Council on Chiropractic Education has designated the following pre-chiropractic requirements. Students should consult specific chiropractic programs directly for various interpretations of these requirements. 90 semester hours at accredited institution with a 3.0 or better. The 90 hours will include a minimum of 24 semester hours in life and physical science courses. At least half of these course will have a substantive laboratory component. The student's undergraduate preparation should include a well-rounded general education program in the humanities and social

sciences. The coursework below is offered only to provide some idea of the range of courses that may be needed. *All applicants should check with the individual schools in which they have interest.*

CSULB courses which fulfill admission requirements for most U.S. Chiropractic programs:

Coursework	CSULB Courses	Units
One year of General Chemistry with Lab	Chemistry 111A & 111B	5, 5
One year of Organic Chemistry with Lab	Chemistry 220A & 220B + 320L (Chem & Biochem majors) OR 220A w/ 223A & 220B w/ 223B (Biology & other majors)	4, 4
One year of General Biology with Lab	Biology 211 & 212	4, 4
One year of General Physics with Lab	Physics 100A & 100B OR 151 & 152	4, 4
One year of English (Composition and Literature preferred)	English 100 AND another course from the English department such as: 102, 180, 300	3, 3
Behavioral Science courses	Sociology 100 and Psychology 100	3, 3

CA Chiropractic Schools:

- [Southern California University of Health Sciences](#)
- [Palmer College of Chiropractic West](#)
- [Life Chiropractic College West](#)

IMPORTANT FACTORS CONSIDERED FOR SUCCESSFUL APPLICANTS

CLINICAL EXPOSURE: Many programs require applicants to have a certain number of volunteer or paid experiences working with patients under the supervision of a licensed chiropractor.

LETTERS OF RECOMMENDATION: Applicants must provide at least one letter of references from a licensed practicing Doctor of Chiropractic. Other reference and evaluation process may vary.

STANDARDIZED TEST: Most programs require the [Graduate Record Examination \(GRE\)](#) for admission and have established a GRE Code for the reporting of scores.

ADMISSIONS CYCLE: Applicants must have completed 90 semester hours or 135 quarter hours of under graduate work with specified coursework leading to a baccalaureate degree at an accredited institution, or the completion of an undergraduate degree at a four-year college (an increasing number of chiropractic programs require the baccalaureate degree. At least a 3.00 GPA (some chiropractic programs may consider a cumulative GPA of 2.75 for baccalaureate degree-holding students). Applications are considered for each academic term. It is recommended the application be submitted one year prior to the desired enrollment. The application process varies between programs. It is important for students to check their specific program for their process and deadlines. Applicants will be required to submit transcripts and a personal statement or essay that expresses their motivation for choosing the chiropractic profession. Some programs conduct informal interviews with each applicant. These interviews generally take place in conjunction with a campus visit.

ADDITIONAL RESOURCES

- [Graduate Record Examination \(GRE\)](#)
- [The Council on Chiropractic Education \(CCE\)](#)
- [The Association of Chiropractic Colleges \(ACC\)](#)
 - [ACC: Prospective Students](#)
- [Discover Chiropractic](#)

For more information on the Chiropractic profession, visit www.discoverchiropractic.org and see your HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events.

General Description

Naturopathic physicians are primary health care providers who are experts in the intersection of conventional practice and natural therapies. NDs emphasize prevention, wellness and optimal health and encourage individuals' inherent self-healing process. The practice of naturopathic medicine includes modern and traditional, scientific and empirical methods, combining the wisdom of nature with the rigors of modern science.

What are some common daily activities/experiences?

A deep doctor-patient relationship, the ability to focus on lifestyle issues, patient education and the root cause of illness constitutes the core of the ND-patient experience. Naturopathic physicians in clinical practice see fewer patients per day than MD or DO counterparts and spend anywhere from one to two hours with new patients. Additionally, naturopathic doctors work in many types of industries, including science, medical and environmental. They can follow diverse career paths, becoming, for example:

- Primary care physicians
- Educators
- Public health administrators
- Research and development scientists
- Consultants for business, insurance, public service and other organizations
- Natural products industry experts
- Media consultants and authors

ND school alumni have created private and collaborative clinics, natural products companies, community education programs and a range of treatment centers around the world, promoting integrative medicine, research and innovative approaches to health.

The majority of ND graduates go on to become clinicians.

What are 3-5 personal characteristics important for happiness and success in your profession?

- NDs are primary care physicians who focus on the health and wellness of their patient. They are doctors with an expressed desire to look beyond symptoms and treat the root cause to help their patients heal. They are doctors who focus on overall health, wellness and disease prevention; doctors who listen to and educate their patients in the steps to achieving and maintaining optimal health; and doctors who measure their success in terms of impact.
- Passion for effective natural medicine and a desire to help patients reach optimal wellness
- Intelligence with an aptitude for the sciences and a history of academic success
- Inquisitive nature, like to get to the root of the problem
- Respect for the environment and social issues, a rich background in volunteerism
- Good communicator with a pleasant "bedside manner"
- Understands and respects both the art and the science of medicine

For more information on many health professions, we recommend the NAAHP publication, [Health Professions Admission Guide: Strategies for Success](#), available on the NAAHP website.

NAAHP Fact Sheet for Health Professions Advisors Naturopathic Medicine

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- What emphasis do I put on quality of life and work/life balance?
- How important is it to have a career consistent with one's ideals/philosophy?
- How can I help others and maintain my own health?
- How important is it to focus on overall health and the root cause of illness?
- Is patient impact or status more important to me?
- Am I prepared to challenge the current healthcare paradigm and be a leader practicing in a rapidly growing field, even though it is not yet the mainstream in today's healthcare system?

Preparing for Admission:

- **Academic**
 - Academic prerequisites vary by school. In general, a common core of pre-med Health Sciences, Biology, General and Organic chemistry is required. Students are accepted from any major as long as GPA and prerequisite requirements are met.
www.aanmc.org/naturopathic-schools/academic-prerequisites/
 - Information on prerequisite courses by individual school:
aanmc.org/naturopathic-schools/academic-prerequisites/
- **Standardized test(s):** No standardized test is required for admission, however MCAT scores may be reviewed at the discretion of the admissions committee.
- **Experience/Exposure:** Naturopathic students are encouraged to speak with or shadow a naturopathic physician prior to application. Pertinent life experience related to medicine, naturopathic or conventional, is also considered.
- **Letters of Recommendation:** Information on LOR vary by school – **www.aanmc.org/naturopathic-schools/academic-prerequisites/** or see details on the NDCAS FAQ: **portal.ndcas.org/ndcasHelpPages/instructions-faqs/supporting-information/references/index.html**
- **Resources for researching schools:**
AANMC List of accredited programs: **aanmc.org/naturopathic-schools/**

The Admissions Cycle:

ND Admissions requirements may be found at each of the member school websites. Additionally the CAS cycle is as follows.

- CAS: **ndcas.liasoncas.com/applicant-ux/#/login** Application opens: August 31
- Application deadlines: vary by program
- Application closes: August 15
- Number of schools participating: Three participating programs, out of seven total member programs: University of Bridgeport, Canadian College of Naturopathic Medicine and Southwest College of Naturopathic Medicine
- Fees: \$115 for first designation, \$40 for each additional designation
- Fee waivers: not offered
- Letters of rec logistics: Electronic only
- Standardized test logistics: NDCAS allows you to enter scores for IELTS, and TOEFL ONLY. Any additional scores must be sent directly to the school
- Transcripts: Submit to NDCAS directly

NAAHP Fact Sheet for Health Professions Advisors

Naturopathic Medicine

- Instruction manual and FAQ: portal.ndcas.org/ndcasHelpPages/instructions-faqs/index.html
- Contact information: ndcasinfo@ndcas.org
- NDCAS - [Facebook](#)
- NDCAS - [Twitter](#)

**Note: all AANMC member schools do not participate in NDCAS, please contact the NUHS, NUNM, Boucher and Bastyr University Admissions offices for more information about their specific admissions processes.

The Admissions Process:

- Approximate dates of interviews, offers: Interview dates vary by institution, contact each school directly www.aanmc.org/naturopathic-schools/
- Advisor portal: uap.webadmit.org/session/new
- Total number of applicants in most recent cycle (through CAS and/or all member programs if known): NDCAS 1410 in progress applicants. This number is not known for other programs.
- Total number of first year students (through CAS and all if known): Approximately 500 total
- Total number of students: Approximately 2200

Learn More about the Profession

Training & Career Opportunities

- Number of years: 4 with 5 year options offered
- Degree attained: ND
- Total number of graduates in most recent academic year: 426

Key Resources for Students

- AANP [Online Directory](#) to find a local ND
- ND Student Association - [Naturopathic Medical Student Association \(NMSA\)](#)

Key Resources for Advisors

- AANMC Advisor information: aanmc.org/advisors/
- US Professional Association - [American Association of Naturopathic Physicians \(AANP\)](#)

Social Media

- AANMC on Facebook: www.facebook.com/TheAANMC
- AANMC on Twitter: twitter.com/AANMC
- AANMC on LinkedIn: www.linkedin.com/company/association-of-accredited-naturopathic-medical-colleges
- AANMC on Instagram: www.instagram.com/theaanmc/
- AANMC YouTube Channel: www.youtube.com/user/AANMCEditor/videos



Advisory Council Professional Association Partner Information

- **The Association of Accredited Naturopathic Medical Colleges, www.aanmc.org**
The Association of Accredited Naturopathic Medical Colleges (AANMC) is the nonprofit organization representing all accredited naturopathic programs in the US and Canada and works collaboratively toward the advancement and improvement of naturopathic medical education.
- **Mission**
The mission of the AANMC is to enhance the individual and collective success of member organizations in delivering high quality, innovative, and accessible naturopathic medical education and research. The AANMC advocates for:
 - Outcomes-based, challenging, humane, and holistic medical education experience
 - Public awareness and support of Naturopathic Medical Education
 - Naturopathic medicine research that improves the knowledge about and the teaching / practice of naturopathic medicine
 - Provision of high quality clinical training through health services in the community
- **Vision**
Naturopathic medical education will be an important, vital, and high-quality choice for individuals seeking health professional careers as physicians.
- **Size of organization, Number of member institutions**
Seven member institutions offering ND programs at eight campuses
 - Bastyr University - Kenmore, WA and San Diego, CA
 - Boucher Institute – Vancouver, BC, Canada
 - Canadian College of Naturopathic Medicine - Toronto, ON, Canada
 - National University of Health Sciences, -Chicago, IL
 - National University of Natural Medicine - Portland, OR
 - Southwest College of Naturopathic Medicine - Phoenix, AZ
 - University of Bridgeport - Bridgeport, CT
- **Accreditation:** AANMC member institutions in the U.S. are accredited by one of the regional accrediting agencies approved by the U.S. Department of Education. In addition, all naturopathic medicine programs of the member schools have been accredited (or are candidates for accreditation) by the Council on Naturopathic Medical Education (CNME). The CNME is the recognized accreditation agency for naturopathic medical programs in North America

Advisory Council Contact Information

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Date updated: December 15, 2017

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.



Naturopathic Doctors in California

In order to be licensed as a naturopathic doctor in California, NDs must graduate from a school accredited by the Council of Naturopathic Medical Education that offers a graduate degree of Doctor of Naturopathy or Doctor of Naturopathic Medicine. The education requirements consist of at least 4,100 hours of training, of which not less than 2,500 hours are academic training and not less than 1,200 hours are supervised clinical training. ND license candidates must also pass a licensing exam that is administered by the North American Board of Naturopathic Examiners.

California Naturopathic Medicine Committee

The Bureau of Naturopathic Medicine was established by the Legislature as part of the Department of Consumer Affairs, and began licensing NDs in January 2005. The Bureau became the Naturopathic Medicine Committee under the Osteopathic Medical Board of California in October 2009. The Committee is designed as a resource for California consumers who choose naturopathic doctors for their healthcare.

In addition to licensing, the Committee provides license status, investigates consumer complaints, and, if needed, pursues disciplinary actions against licensed NDs. Licensure ensures that naturopathic doctors have the required educational training, have passed the

required examination(s), and have met ongoing educational requirements that help them stay current with professional practice. Please visit the Committee's Web site for additional information at www.naturopathic.ca.gov

How Are Complaints Filed?

You can obtain a complaint form by calling the Naturopathic Medicine Committee at (916) 928-4785, by using the on-line complaint form, or by downloading a complaint form on the Web site at www.naturopathic.ca.gov/consumers/complaint.

Other Resources

The California Naturopathic Doctors Association (CNDA) is a professional association of naturopathic doctors in California. Contact information:

1017 "L" Street, Suite 192
Sacramento, CA 95814
www.calnd.org

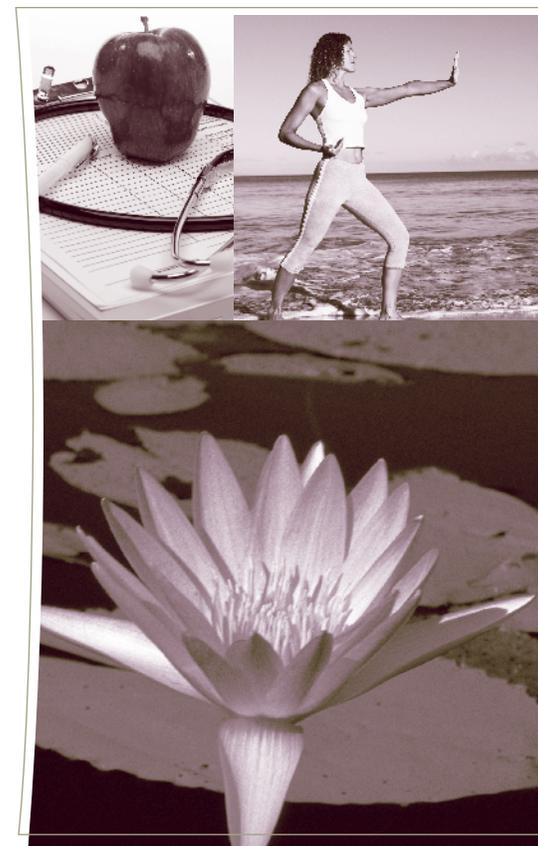
600 S. Lake Avenue, Suite 308
Pasadena, CA 91106
(626) 793-0140
www.calnd.org

The American Association of Naturopathic Physicians (AANP) is a national professional society representing licensed or licensable naturopathic physicians. Contact information:

4435 Wisconsin Ave NW, Suite 403
Washington, DC 20016
Toll free: 1-866-538-2267
www.naturopathic.org



A Consumer's Guide to



Naturopathic Medicine

What is Naturopathic Medicine?

Naturopathic medicine is a distinct and comprehensive system of primary health care that uses natural methods and substances to support and stimulate the body's self-healing process. It is distinguished by the principles on which its practice is based. These principles include:

- 1. The Healing Power of Nature:** Naturopathic doctors (NDs) trust in the body's inherent wisdom to heal itself.
- 2. Identify and Treat the Cause:** Look beyond the symptoms to effectively address the underlying cause(s) of illness.
- 3. First Do No Harm:** Seek to utilize the most natural, least invasive, and least toxic therapies first.
- 4. Doctor as Teacher:** The primary role of an ND is a teacher who educates and encourages people to take responsibility for their own health and to take steps to achieve and maintain optimal health.
- 5. Treat the Whole Person:** Total health includes physical, emotional, mental, genetic, environmental, social, spiritual, and other factors.
- 6. Prevention:** Encourage and emphasize disease prevention and focus on promoting health and wellness.



Naturopathic doctors are trained in a wide variety of complementary and alternative therapies, including:

- Herbal and Homeopathic Medicine
- Clinical Nutrition and Diet
- Vitamins, Amino Acids, Minerals, Enzymes, and Nutraceuticals
- Physical Medicine such as Massage, Bodywork, Exercise Therapy, and Hydrotherapy
- Counseling and Behavioral Therapies
- Health and Lifestyle Counseling

In addition, NDs may prescribe hormones. They may also order other prescription drugs in collaboration with a medical doctor.

Why Visit a Naturopathic Doctor?

If you are looking for any or all of the following:

- a primary health care provider
- treatment for acute or chronic conditions
- a prevention-oriented holistic approach to your health
- someone to work in an integrated way with your current medical doctor

Naturopathic medical care can benefit all Californians, from those looking for help with a



specific health condition to those seeking to improve general health and wellness. NDs treat infants to senior citizens, men and women, and those in all stages of health and disease. Naturopathic medicine can benefit people who prefer a natural approach to their health care as well as those seeking integrated solutions to their health needs.

What to Expect from a Visit to a Naturopathic Doctor

Discussing your needs with a naturopathic doctor will help to focus your care. A typical first visit with an ND lasts 60–90 minutes and includes taking a relevant health history, conducting an appropriate examination, and making recommendations for treatment. It may include gathering information such as laboratory test results, medical records, a diet diary, and other information. Follow-up visits vary in length and frequency depending on the individual nature of



the health issues being addressed, therapies being utilized, and other treatment goals.

NDs have different styles and areas of emphasis in their practices. Some may act as general practitioners—some may focus on particular areas of health such as detoxification or immune support, and others may focus on particular therapies such as homeopathy or nutrition. Selecting a naturopathic doctor who is right for you depends on the type of condition for which you are seeking help and the types of therapies that interest you.

When working with a naturopathic doctor, plan to be actively involved in your treatment. Your ND may work with you to change your diet or exercise habits, teach you ways to reduce stress, as well as use supplements, vitamins, herbs, and other medicines and treatments to help you meet your goals. Ask questions about your treatment and inform your ND about signs of improvement or stubborn symptoms. Your ND may consider further diagnostic tests, changes in your treatment plan, or referrals to other health care professionals.

Insurance Coverage for Naturopathic Care

More and more insurance companies are covering naturopathic medical care. Ask your carrier about coverage or reimbursement.

If you have insurance that does not cover naturopathic medical care, use of a Health Savings Account (HSA) or flexible spending account may cover this care. Check with your employer to determine if one of these options is available to you.

How Do I Find a Licensed Naturopathic Doctor?

You can access a list of licensed naturopathic doctors by selecting “Verify a License” on the Naturopathic Medicine Committee’s Web site at www.naturopathic.ca.gov.

Naturopathic Medical Training and Education

Naturopathic doctors attend four-year, graduate-level, accredited naturopathic medical schools. NDs are trained as primary care practitioners. Training covers a wide range of therapies as well as science and clinical courses. An important aspect of naturopathic medical training is learning about other health care professions and appropriate referral patterns.





Dentistry

NAAHP Fact Sheet for Health Professions Advisors

Dental Medicine



Overview of the Profession

Dentistry is a profession that combines science and technology with helping people enhance and maintain their oral health. As health care practitioners, dentists diagnose, treat and help prevent diseases, injuries and malformations of the teeth and mouth. They use a variety of cosmetic dental procedures for individuals looking to improve their appearance; perform surgical procedures, such as implants, tissue grants and extractions; educate patients on how to take better care of their teeth and prevent oral diseases; teach future dentists and dental hygienists; and perform research directed to developing new treatment methods and improving oral health.

The majority of the more than 190,000 professionally active dentists are private practitioners. Most dentists practice in office settings, typically in solo practices with an average of five employees. The majority enter a practice immediately after receiving a doctoral degree in dentistry, either a Doctor of Dental Surgery (D.D.S.) or a Doctor of Dental Medicine (D.M.D.)—there is no difference between the two degrees.

An estimated 79% of dentists in the United States are general practitioners. The remaining 21% of dentists are involved in one of the nine dental specialties recognized by the American Dental Association, which require additional education after receiving the D.M.D. or D.D.S. The nine specialties are:

1. Orthodontics and dentofacial orthopedics—the treatment of problems relating to dental development, missing teeth and other abnormalities affecting both normal function and appearance.
2. Oral and maxillofacial surgery—the diagnostic and operative services dealing with disease, injuries and defects in the jaw and related structures.
3. Endodontics—the diagnosis, prevention and treatment of diseases of the pulp and other dental tissues that affect the vitality of the teeth.
4. Periodontics—the diagnosis and treatment of diseases that affect the oral mucous membranes and other soft tissues that surround and support the teeth.
5. Pediatric dentistry—the treatment of children and adolescents.
6. Prosthodontics—the replacement of missing natural teeth with fixed or removable substitutes.
7. Oral and maxillofacial pathology—the provision of diagnostic and consultative biopsy services to dentists and physicians.
8. Dental public health—the control and prevention of dental disease through organized community efforts.
9. Oral and maxillofacial radiology—the use of images and data produced by all modalities of radiant energy to diagnose and manage diseases, disorders and conditions of the oral and maxillofacial regions.

What are some common daily activities/experiences?

Common daily activities may include:

- Educating individuals needing care about their oral health.
- Performing clinical procedures, such as exams, restoration, crowns, implants, extractions and corrective surgeries.
- Identifying, diagnosing and treating oral conditions.
- Managing the day-to-day activities of the dental office.

NAAHP Fact Sheet for Health Professions Advisors Dental Medicine

What are 3-5 personal characteristics important for happiness and success in your profession?

- Curious/observant
- Compassionate
- Creative/artistic
- Precise/meticulous
- Leader

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- What makes me excited about being a dentist?
- Am I comfortable having close physical contact with others?
- How comfortable am I working independently and making decisions without supervision?
- Am I willing to work in an environment where I am exposed to disease and infection?
- How important is it to me to attend to details?

Preparing for Admission

Academic

- One year (8 credits) each: English; Biology with labs; General Chemistry with labs; Organic Chemistry with labs; and Physics with labs. Some schools now require Biochemistry.

Standardized test(s)

- All U.S. dental schools require applicants to take the [Dental Admission Test](#) (DAT), which is administered by the American Dental Association (ADA). There is no limit on the number of schools that applicants can designate to receive their DAT scores, which are posted on a secure website for each dental school to view directly from the ADA. DAT scores are automatically imported into the ADEA AADSAS® (ADEA Associated American Dental Schools Application Service) application and sent to the dental schools designated by applicants if they select at least one ADEA AADSAS-participating school when they register for the test. Questions about the DAT should be directed to Dr. Kathy Hinshaw (hinshaw@ada.org), Manager, ADA Department of Testing Services.

Experience/Exposure

- It is recommended that students shadow a general dentist, a specialist, or both before applying to dental school.

Letters of Recommendation

- Letters of recommendation, also known as letters of evaluation, are required with the ADEA AADSAS application and are accepted in both print and digital formats.
- Submitting letters of evaluation does not hold up the processing of the application. Letters received after the application has been sent to designated schools will be added to the updated application materials provided to schools as soon as they arrive at ADEA AADSAS.

NAAHP Fact Sheet for Health Professions Advisors Dental Medicine

- Applicants can submit up to four individual letters of recommendation or one committee report (or composite evaluation) with an additional letter of evaluation.
- Individual dental schools also sometimes ask for additional letters of recommendation separate from the ADEA AADSAS application.
- Undergraduate institutions have different systems for completing letters of recommendation for students applying to dental school. It is important that students find out which system their school uses as early as possible, so they can start forming strong relationships with potential evaluators early in their undergraduate career.
- More information can be found on the [ADEA GoDental® website](#).

The Admissions Cycle

CAS contact information

Visit [ADEA GoDental](#) for information and resources about the application process.

ADEA AADSAS Application: Applicant Contacts

- *Link:* adea.org/aadsas
- *Email:* aadsasinfo@aadsasweb.org
- *Call:* 617-612-2045 (applicant inquiries only)
- *Mail:* ADEA AADSAS, P.O. Box 9110, Watertown, MA 02471

Current number of participating programs versus total member programs

- There are 67 participating programs, which includes all U.S. dental schools and one Canadian dental school.
- Texas residents applying to in-state dental schools are required to use the Texas Medical and Dental Schools Application Service (TMDSAS). Texas residents applying to out-of-state schools and non-Texas residents applying to Texas dental schools use ADEA AADSAS.
- The Dalhousie University Faculty of Dentistry is the only Canadian dental school that participates.

Open period

- The 2019 ADEA AADSAS application cycle will initiate a soft launch on May 15, 2018 and officially opens for application submission on June 5, 2018.
- Applicants are strongly encouraged to apply early. Individuals submitting applications close to a school's deadline should be especially vigilant to make sure that all transcripts are submitted in a timely manner to ensure that applications are transmitted to designated schools as promptly as possible.

Submission deadlines

- The 2019 application cycle closes on Feb. 1, 2019.
- Each dental school indicates its deadline date and is the last date applicants can submit their ADEA AADSAS application.

Applicant code of conduct or required institution certification or statement

- ADEA AADSAS policies and release statements and the ADEA Privacy/Confidentiality Statement can be found at: adea.org/GoDental/ADEA_AADSAS_Application/Personal_information.aspx.

NAAHP Fact Sheet for Health Professions Advisors

Dental Medicine

Fees; Fee waivers

2019 Fees

- \$245 for initial designation.
- \$102 for each additional designation.

Fee Waivers

- ADEA AADSAS offers a Fee Assistance Program for applicants with severe financial need. Detailed instructions about the program can be found in the ADEA AADSAS application.
- Qualifying applicants receive a waiver of the initial designation fee and two additional schools. They must pay for any additional designations beyond the first three.

Letters of reference delivery method(s)

- ADEA AADSAS accepts both digital and print letters.
- Submitting letters of evaluation does not hold up the processing of the application; letters received after the application has been sent to designated schools will be added to updated application materials provided to schools as soon as they arrive at ADEA AADSAS.
- Up to four individual letters of evaluation can be submitted per applicant or one committee report (or composite evaluation) plus one additional letter of evaluation. See ADEA AADSAS instructions for detailed information.

Background check services if applicable

- Not provided.

Key Resources for Students

Social media sites:

- Facebook: www.facebook.com/ADEAGoDental1
- Twitter: www.twitter.com/ADEAGoDental.

Key Resources for Advisors

- Advisors Portal: uap.webadmit.org
- **Complimentary online access to the ADEA Dental School Explorer—How to Register**
ADEA offers health professions advisors complimentary subscriptions to the online ADEA Dental School Explorer tool. To request access, please email Alex Prescott at prescotta@adea.org. For more information on the ADEA Dental School Explorer, visit adea.org/officialguide.

Overview of Professional Association

Mission

- ADEA's mission is to lead institutions and individuals of the dental education community to address contemporary issues influencing education, research and the delivery of oral health care for the overall health and safety of the public. As the sole national organization representing academic dentistry, ADEA is The Voice of Dental Education.

Size of organization, number of member institutions

NAAHP Fact Sheet for Health Professions Advisors Dental Medicine

- ADEA employs approximately 70 full-time staff and includes the following departments:
 - Advocacy and Governmental Relations.
 - Communications and Membership.
 - Finance.
 - Information Technology.
 - Learning.
 - Office of Policy, Research and Diversity.
 - Office of the President and CEO.

ADEA members include all 76 U.S. and Canadian dental schools, more than 1,000 allied and advanced dental education programs, 66 corporations and more than 20,000 individuals.

New institutional members in last two years

- None.

Total number of students (through CAS and/or all member programs if known)

- Total number of applicants for the 2018 application cycle: 11,100.
- Average number of applications per applicant: 10.

Total number of first year students (through CAS and all if known)

- 2017-6,184.

Total number of graduates in most recent academic year

- 2017-6,238

Data on employment rates of recent graduates if available

Not provided.

Council Member & NAAHP Liaison Contact Information

- | | |
|--|--|
| <ul style="list-style-type: none">▪ Advisory Council:
Carolyn Booker
202-513-1184
BookerC@adea.org | <ul style="list-style-type: none">▪ NAAHP Liaison:
Francie Cuffney
Meredith College
cuffney@meredith.edu |
|--|--|

Updated: December 2018

For more information on many health professions, we recommend the NAAHP publication, [Health Professions Admission Guide: Strategies for Success](#), available on the NAAHP website.

DENTAL (D.D.S.)

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Dentistry is a branch of the healing arts and sciences devoted to maintaining the health of the teeth, gums, and other hard and soft tissues of the oral cavity and adjacent structures. The United States Department of Labor Statistics reports that in 2014 dentists held about 151,500 active jobs in the United States. Dentistry requires diagnostic ability and manual skills. Dentists should have good visual memory, excellent judgment of space and shape, a high degree of manual dexterity, and scientific ability. Good business sense, self-discipline, and communication skills are helpful for success in private practice.

Though earnings vary according to number of years in practice, location, hours worked, and specialty, the ADA reports that in 2014 the average net income for an independent private practitioner who owned all or part of his or her practice was \$202,760, while dental specialists earned an average net income of \$303,790. The overall median pay for a dentist was \$159,770. Employment of dentists is expected to grow faster than average for all occupations through 2022. Although employment growth will provide some job opportunities, most jobs will result from the need to replace the large number of dentists expected to retire. Job prospects should be good as new dentists take over established practices or start their own (OOH, 2016).

DENTAL EDUCATION

Currently there are 66 dental schools in the United States and 10 Canadian dental schools. Most dental schools award the degree of Doctor of Dental Surgery (D.D.S.). The rest award an equivalent degree, Doctor of Dental Medicine (D.M.D.). Dental school usually lasts 4 academic years. Studies begin with classroom instruction and laboratory work in basic sciences including anatomy, microbiology, biochemistry, and physiology. Beginning courses in clinical sciences, including laboratory techniques, are also provided at this time. During the last 2 years, students treat patients, usually in dental clinics, under the supervision of licensed dentists. All 50 States and the District of Columbia require dentists to be licensed. In most states, a candidate must graduate from a dental school accredited by the American Dental Association's Commission on Dental Accreditation, and pass written and practical examinations to qualify for a license. A degree in dentistry can lead to dental careers in a variety of settings including, academic dentistry, general dentistry (private or group practice), dental specialties, dental research, public policy, international health, and government/military.

CLINICAL FIELDS / SPECIALTIES IN DENTISTRY

1. **General Dentistry:** use their oral diagnostic, preventive, surgical, and rehabilitative skills to restore damaged or missing tooth structure and treat diseases of the bone and soft tissue in the mouth and adjacent structure
2. **Dental Public Health:** treats the community rather than the individual patient
3. **Endodontics:** deals with diseases of the pulp and other dental tissues
4. **Oral and Maxillofacial Pathology:** study and research of the causes, processes, and effects of diseases with oral manifestations
5. **Oral and Maxillofacial Radiology:** taking and interpretation of conventional, digital, CT, MRI, and allied imaging modalities of oral-facial structures and disease

6. **Oral and Maxillofacial Surgery:** concerned with diseases, injuries, and defects of the neck, head, jaw, and associated structures
7. **Orthodontics and Dentofacial Orthopedics:** concerned with treating problems related to irregular dental development, missing teeth, and other abnormalities
8. **Pediatric Dentistry:** concerned with the treatment of children, adolescents and young adults whose dental development is not complete
9. **Periodontics:** concerned with diseases that affect oral mucous membranes that surround and support the teeth
10. **Prosthodontics:** science and art of replacing missing natural teeth with fixed or removable substitutes

ACADEMIC PREPARATION

Aside from prerequisite courses, it is recommended that students engage in extracurricular activities such as volunteering in a dental setting and community service. Pre-dental students should be able to demonstrate their potential for independent critical thought, leadership, concern for others, and an understanding of the dental profession. Additionally, pre-dental students should work at developing and/or improving manual dexterity and eye-hand-coordination.

For the fall 2016 entering class, about 51% of applicants were accepted to dental school (12,058 applicants and 6,099 enrollees). In 2016, the **mean GPA** for accepted students to US dental schools was a **3.55 (Total) and 3.46 (Science)** (ADEA: Official Guide to Dental Schools, 2017). The average 2016 enrollee **DAT test score was 20.3.**

Any major is appropriate for dental school preparation. While a science major requires many of the same basic prerequisites, selecting a science major is not required for admission to any dental school. Students are advised to select a major they find interesting and to work at developing a broad-based, interdisciplinary foundation of knowledge and skills from which they can build upon.

COURSE REQUIREMENTS

Prerequisite admission requirements vary from school to school. For the specific requirements at individual dental schools, refer to “ADEA: Official Guide to Dental Schools” available for purchase, at the [American Dental Education Association \(ADEA\)](#).

CSULB Courses which fulfill admission requirements for some dental schools:

Students maintain responsibility for verifying course selection with individual dental programs.

Coursework	CSULB Courses
One year of General Chemistry with Lab	Chemistry 111A & 111B
One year of Organic Chemistry with Lab	Chemistry 220A & 220B + 320 L (Chem. & Biochem. majors) OR 220A w/ 223A & 220B w/ 223B
One year of General Biology with Lab	Biology 211, 212 & 213
One year of General Physics with Lab	Physics 100A & 100B OR 151 & 152
One year of English (Composition and/or Literature)	English 100 AND one of the following 101,102, or 300
Additional courses in Biology, including Anatomy	Biology 208
One or more courses in Psychology	Psychology 100
One or more courses in Biochemistry	Chemistry 441A and/or 441B or 448
One semester to one year of Math (Calculus)	Math 119A OR 122 & 123
One course in Statistics	Biology 260 OR Statistics 108

All United States dental schools require applicants to take the Dental Admission Test (DAT). The [UCLA School of Dentistry offers Pre-Dental laboratory courses](#) to strengthen perceptual skills. These courses are offered over weekend days a few times a year.

For more information about dental school, visit www.adea.org/GoDental/ and see the HPAO website for further information on the application process, application assistance, and a list of upcoming workshops and events.

Dental School Applicant Quick Guide

Apply to traditional D.D.S. or D.M.D. programs through ADEA AADSAS® (ADEA Associated American Dental Schools Application Service).

ADEA AADSAS OPENS IN MID-MAY AND CLOSSES IN EARLY FEBRUARY.

Schools notify applicants of provisional offers of admissions in early December.

Who does what in the ADEA AADSAS application process?

1 APPLICANTS:

1. Submit the ADEA AADSAS application online and designate dental schools.
2. Send all official college and university transcripts to:
ADEA AADSAS, PO Box 9110, Watertown, MA 02471
3. Specify who writes the letters of evaluation.
4. Schedule a date to take the U.S. Dental Admission Test (DAT), administered by the American Dental Association (ADA) or the Canadian Dental Aptitude Test (CDAT), administered by the Canadian Dental Association (CDA).

2 ADEA AADSAS:

1. Verifies all transcripts and calculates the ADEA AADSAS GPAs.
2. ADA imports DAT scores to ADEA AADSAS. CDA provides official scores to dental schools.
3. Processes and submits the final application to the applicant's designated dental schools.

3 DENTAL SCHOOLS:

1. Review completed applications and supplemental materials.
2. Interview selected applicants.
3. Make individual admissions decisions.

Resources to help when applying to dental school.

EVENTS. View information for engagement opportunities and receive tips on applying. adea.org/GoDental/Events

ADEA OFFICIAL GUIDE TO DENTAL SCHOOLS.

Learn about each of the dental schools in the U.S. and Canada and how to apply. adea.org/officialguide

ADEA DENTAL SCHOOL EXPLORER. This contains profiles of all U.S. and Canadian dental schools. All are searchable by keyword and filters. adea.org/dse

Tips for ADEA AADSAS application readiness.

Before starting your application, be sure to read the application instructions at adea.org/GoDental/Apply.



Personal Information



Academic History



Supporting Information



Program Materials

Personal Information

- Keep your contact information updated, especially email addresses. Dental schools use this to contact you.
- Register for a DENTPIN from the ADA.

Academic History

- Use the Transcript Request Form to request all official transcripts. ADEA AADSAS will match them to your application.
- Pay close attention to details when entering coursework and standardized test dates.

Supporting Information

- Compose a strong personal statement.
- Identify individuals who know you well and request letters of evaluation at least two months before applying.

Program Materials

- Review individual dental school requirements and supplemental information.
- Designate the dental school(s) you want to receive your ADEA AADSAS application.

Vinmar Solutions Pre-Dental Courses hosted at UCLA School of Dentistry

Do you know anyone who's interested in Dental School? Before or after they take the DAT, manual dexterity is an important ability to have before going to dental school.

The Pre-Dental Laboratory Technique Courses has helped thousands of participants in major universities and colleges in the Northern and Southern California areas since 1979. Many participants have taken advantage of these courses throughout the United States and have traveled from other countries. The **Pre-Dental Courses are like no other.**

Each course goes into detailed instructions and illustrations that will help participants through the construction process in a step-by-step manner. It also helps each participant to get a quick start to practice manual dexterity before dental school. Manual dexterity is an important ability to have, because it is a requirement for dental school.

- Learning the basics of tooth anatomy and occlusal surfaces.
- Learning a rapid waxing technique of extensive occlusal rehabilitation of tooth structure.
- Identify in detail the character of mandibular movement and how it can affect occlusal anatomy.
- Self-examination and homework.
- Utilization of dental hand instruments and waxing techniques.
- Final practical examinations.
- **UCLA Certificate of Completion and Letter of Recommendation in 2 Days**

In this digital age tooth waxing and setting denture teeth can be very frustrating in dental school. These courses will help beginners to overcome the problem by learning hands-on techniques before the school dental experience. After participating in these courses it will greatly enhance hand instrument techniques such as: finger dexterity, Arm-hand steadiness and aiming, reaction time, which will help your technical skills.

No experience required!!



Discount Photo

Group Discount on Vinmar Solutions Pre-Dental Beginners Tooth Waxing and Denture Course Kit

for details "click Photo"



Pre-Dental Beginner Tooth Waxing and Denture Course (intro course)

Learning Objectives

- Hands-on techniques of hot dropping wax patterns and shapes
- Behavior of wax hot flow and solidification
- Learn step-by-step procedure of reconstructing a mandibular molar
- Setting upper and lower anterior denture teeth
- Denture festooning techniques

1 Day Course

2017 Dates:

May 20 **REGISTER ONLINE** | June 3 **REGISTER ONLINE** | July 15 **REGISTER ONLINE**
August 26 **REGISTER ONLINE** | September 9 **REGISTER ONLINE** | October
21 **REGISTER ONLINE**
November 4 **REGISTER ONLINE** | December 2 **REGISTER ONLINE**

Course Fee: (per date) \$145

Required Course Materials: [Beginner Course Kit: \\$165](#)



Pre-Dental Tooth Waxing

Anterior Teeth of Maxillary Arch and Posterior Teeth of Mandibular Arch

Pre-Requisite: All participants must take the “Beginner Tooth Waxing and Denture Course” before registering for this advanced course.

Learning Objectives

- Learn the basics of tooth anatomy and occlusal surfaces
- Learn a rapid waxing technique of extensive occlusal rehabilitation of anterior and posterior tooth structure
- Identify, explain, drawing exercises and self-test prior final exam
- Utilization of dental hand instruments and waxing techniques
- Correctly name parts of the tooth numbers 6 through 11 and 19 and 30

2 Day Course

2017 Dates:

February 25-26

June 17-18

REGISTER ONLINE

September 16-17

REGISTER ONLINE

December 9-10

REGISTER ONLINE

Course Fee (Saturday and Sunday): \$145

Required Course Materials: [Tooth Waxing Kit: \\$295](#)



Pre-Dental Quadrant Denture

Pre-Requisite: All participants must take the “Beginner Tooth Waxing and Denture Course” before registering for this advanced course.

Learning Objectives

- Behavior of wax hot flow and solidification to contour gingiva surface
- Learn a step-by-step procedure of the anterior and posterior teeth
- Identification of upper and lower anterior denture teeth
- The art of arranging plastic teeth
- Gingiva contouring of both the upper and lower arches
- Teeth arrangement and anatomical landmarks
- Wax-up and festooning techniques
- 3 steps of setting mandibular posterior teeth
- Written examination

2 Day Course 2017 Dates:

April 22-23 **REGISTER ONLINE** | August 5-6 **REGISTER ONLINE** | November 18-19 **REGISTER ONLINE**

Course Fee (Saturday and Sunday): \$145

Required Course Materials: [Quadrant Denture Kit: \\$295](#)



Pre-Dental - Impression and Cast Making Course

Learning Objectives

- Learn to hand mix dental materials
- Learn adequate alginate impressions
- Learn to trim dental model to proper dimensional height for study purposes
- Learn to use Techniques on (dental model trimmer and dental vibrator)

1 Day Course 2017 Date:

July 1 **REGISTER ONLINE**

Course Fee: (per date) \$145

Required Course Materials: [Impression Course Kit: \\$165](#)

The Vinmar Solutions Pre-Dental Golden Hands Performance Award



The Vinmar Solutions Golden Hands Performance Award honors selected individuals who have accomplished or have met certain requirements in their abilities to exercise fine motor control and possess excellent eye hand coordination.

This award also, identifies **selfless individuals** who have worked together to assist other participants to achieve their motor skills without seeking to put oneself in the spotlight or credit for his or her efforts.

The nominees will be selected by the Vinmar Solutions Course Director and selected TA's during the pre-dental courses. This will also include participants taking part in the courses. (The participants includes: Pre-Dental Students, Dental Assistants, Dental Technicians, Dental Hygienists and International Dentist.)

The nominees will be selected based on the following criteria:

Have registered for the Beginners Tooth Waxing and Denture Course to qualify as a nominee. And have passed 2 Pre-Dental Courses and have completed the Polymer Clay Model Study Block.

Have displayed outstanding performance in eye- hand coordination, good steady hands and stamina.

Shown strong interpersonal skills as a people person. Interacting with other participants and had listened to instructions.

Great communication skills with the ability to explain technical and dental terminology.

Have displayed compassion and honesty toward his or her work projects. Also showed honesty at judging other participants work projects.

Good problem solver in making corrections in areas needed on his or her work projects. Having the ability to be exact in his or her work and the ability to pay attention to details in his or her work assignments.

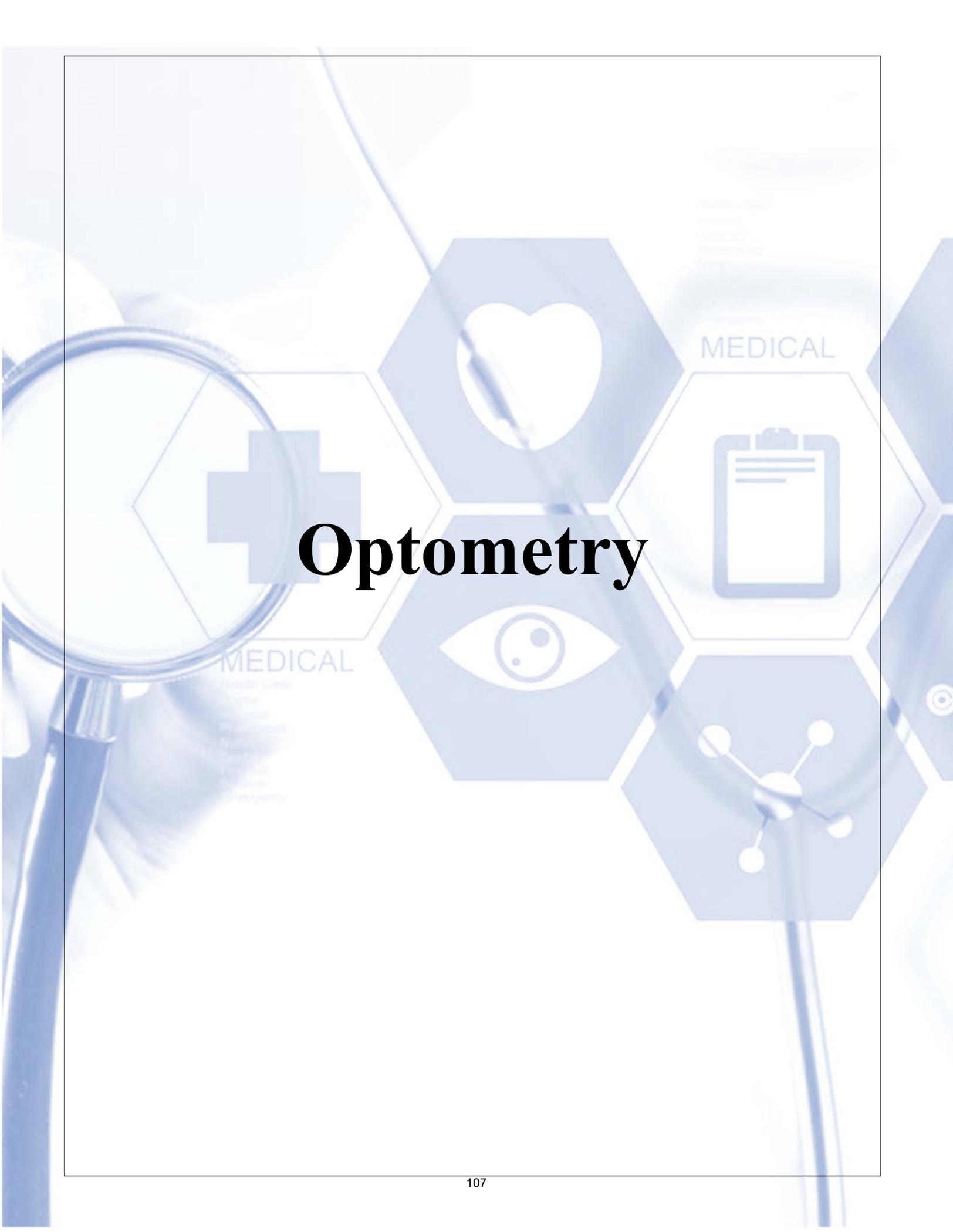
If you want to join the ranks of the **best** of the **best**, this is your opportunity to make your performance count. Remember, its putting forth the effort that count, which sharpens your fine motor skills in manual dexterity for dental school. Dental school admissions committees expect that applicants have worked hard to develop these skills prior to admission. And most important, these one-of-a-kind courses will assist you in developing an unselfish attitude in helping you to think about what is good for other people, not just about your own advantage, which is one of the qualities of leadership in the dental profession.

The recipient:

Will receive this award upon completing and passing the Tooth Waxing Course Part 1 or 2 and the Quadrant Denture Course Part 1 and 2, along with completing the Polymer Clay Study Block. Added to the Golden Hand Performance Award the recipient will be given a Certification of Completion from the UCLA Continuing Education Programs and a personal Letter of Recommendation from the Pre-Dental Course Director/Instructor. Vinmar Solutions, "Is putting eyes and hands to work".

Register at UCLA School of Dentistry ["Continuing Dental Education"](#)

Vinmar Solutions Pre-Dental Polymer Clay Tooth # 30 Study
For Pre-Dental Students, Dental Students, Dental Technicians, and Dental Assistants

The background is a light blue collage of medical-related elements. It features a grid of hexagons containing icons: a heart, a cross, a clipboard, an eye, and a molecular structure. The word 'MEDICAL' is repeated in a sans-serif font. A magnifying glass is visible on the left side, and a stethoscope is at the bottom. The overall aesthetic is clean and professional.

Optometry

General Description:

Some people will tell you that doctors of optometry diagnose and treat disorders of the eye. What optometrists really do – each and every day – is make a real difference in real lives. Optometrists reveal new vistas, return lost joys, empower greater achievement, and preserve un-lived lives. That’s what optometrists do.

What are some common daily activities/experiences?

Optometrists provide full-scope primary optometric care. Their day can be quite varied and challenging. Patient interaction can include performing routine visual exams, removing a foreign body from the cornea, evaluating a child who is not performing well in school, fitting a contact lens patient, prescribing medication for glaucoma, providing follow-up care after refractive surgery, and/or fitting a patient who is legally blind with a magnifying device that enables the patient to read.

What are 3-5 personal characteristics important for happiness and success in your profession?

- Must enjoy people and be energized by interacting with them: this is a number one priority!
- Must enjoy working with others in a collaboratively way to solve problems: this happens with patients and with office staff.
- Must like repetition: being an optometrist is more like a teacher who teaches the same class over and over where the only thing that changes is the student.
- Must be accepting of the “human animal”: patient care involves handling a human being.

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- Am I energized by interaction with people or is it taxing?
- Can I work collaboratively to solve problems in a solution-oriented way?
- Can I deal with repetition and explaining the same things over and over?
- Can I deal with up close and personal with a human being?

Preparing for Admission:

- **Academic:** The requirements for admission to the schools and colleges of optometry vary, but students wishing to study optometry should be certain to take at least a year of biology, chemistry, organic chemistry, general physics, and microbiology; English; college mathematics; and other social science and humanities courses. The science courses should be pre-professional level courses designed for science majors or health professional students and should offer laboratory experience. Brief survey courses in the sciences will not prepare students for optometry school. Students should be sure to consult with the health professions advisor at their school or an advisor at the school or college of optometry that they plan to attend.
 - Access a list of prerequisites [here](#).
- **Standardized test(s):** All schools and colleges of optometry require the Optometry Admission Test (OAT). For further information, please go to the [OAT website](#).
- **Experience/Exposure:** Most schools consider an applicant’s exposure to optometry to be of vital importance. Each applicant should become acquainted with at least one optometrist and if possible gain some firsthand experience to see what optometrists do on a daily basis.
- **Letters of Recommendation:** Suggested sources strongly encouraged for LORs include:
 - An optometrist who can state through documented experience that the applicant knows what the profession of optometry entails.

NAAHP Fact Sheet for Health Professions Advisors

Optometry

- A professor with whom the applicant has done personal work (such as assisted on a specific project or served as a TA or reader), or with whom the applicant took a course.
- An employer or extracurricular activity advisor who can comment about the applicant's maturity, diligence, and conscientiousness.
- **Resources for researching schools:**
[List](#) of member schools and colleges.

The Admissions Cycle:

- CAS(es): **OptomCAS:** <http://www.optomcas.org/>
- Application opens/application can be submitted: Late June/early July
- Deadlines: Submission deadlines are between December and first of June depending on the program; deadlines are available on the [OptomCAS website](#) under Information about Schools and Colleges.
- Application closes: early June
- Number of schools participating: All 23 schools and colleges of optometry participate in OptomCAS.
- Fees, fee waivers: For 2017-2018, the application fee is \$175 for one institution and \$70 for each additional institution. OptomCAS does not offer fee waivers.
- Letters of recommendation logistics: Applicants may designate up to four letters of recommendation. OptomCAS will only accept electronic LORs. The LOR requirements for each school and college are available on the [OptomCAS website](#) under Information about Schools and Colleges.
- Standardized test logistics: Official OAT scores are transferred to OptomCAS and are available to the schools/colleges the applicant designates.
- Transcripts: Official transcripts should be sent directly to OptomCAS by the program deadline.
- Instruction manual and FAQ: Included at the bottom of the OptomCAS applicant portal, in addition at the top of the applicant portal where the question mark is and also on the drop down menu under the applicant's name.
- Criminal Background Checks: Criminal backgrounds will continue as an option for schools and colleges of optometry.
- Contact information for students: 617-612-2888/optomcasinfo@optomcas.org
- CAS contact for advisors: Kate Owen, Senior Customer Solutions Manager, 617-612-2086, kowen@liaisonedu.com
- Social Media for the CAS: N/A

The Admissions Process:

- Approx dates of interviews, offers: Varies from institution to institution.
- Advisor portal: OptomCAS provides a portal for advisors to access school-specific information about their applying advisees.
 - [Click here](#) to create an OptomCAS account.
 - [Click here](#) to log in to an existing OptomCAS account.
- Total number of applicants in 2016-2017 admissions cycle (through CAS and/or all member programs if known): 2,687
- Average # of applications per student: 4.96
- Total number of first year students (through CAS and all if known): 1,913 in 2016-17
- More information on previous application cycles can be found on the [OptomCAS website](#) under Applicant Data Reports.
- Total number of students: The total enrollment in 2016-17 for the schools and colleges of optometry was 7,024.

NAAHP Fact Sheet for Health Professions Advisors

Optometry

Learn More about the Profession

Training & Career Opportunities

- Number of years: Four
- Degree attained: Doctor of Optometry (OD)
- Total number of graduates in most recent academic year: 1,666 graduates in 2016
- Data on employment of recent graduates, if available: N/A

Key Resources for Students

- [Applicants Resource Page](#)
- [Be a Doctor of Optometry: Put Your Future in Focus Video](#)
- [Doctor of Optometry Changing Lives Daily Video](#)
- [Why I Chose the Field of Optometry Video](#)
- [Podcast: Is Optometry for Me?](#)
- [Podcast: Misconceptions of Optometry](#)
- [The “True Stories” Booklet](#)
- [Optometry: A Career Guide](#)

Key Resources for Advisors

- Advisor Portal URL(s): To [create](#) an account or to [log in](#) to an existing account.
- [Advisor Resource Page](#)
- Data/Stats/Info Warehouse: On the [OptomCAS website](#) under Applicant Data Reports and also on the [ASCO website](#) under [Library/Resources/Data Surveys](#).

Social Media

- [ASCO Facebook](#)
- [ASCO YouTube Channel](#)
- [ASCO Twitter Page](#)
- [ASCO LinkedIn Page](#)
- [ASCO Instagram](#)

Advisory Council Professional Association Partner Information

Association of Schools and Colleges of Optometry (ASCO), <https://optometriceducation.org/>

- **Mission**

“The Association of Schools and Colleges of Optometry (ASCO) advances optometric education and research to enhance the health and well-being of the public.”

The Association of Schools and Colleges of Optometry (ASCO) accomplishes this mission through collaboration with educators, administrators, residents, students, industry, government, healthcare organizations, and other stakeholders through its education, research, advocacy and development activities, in order to nurture robust, forward-thinking, and evidence-based optometric education and research.

- **Size of organization, Number of member institutions:** 23 schools
- **New institutional members in last two years:** 0

NAAHP Fact Sheet for Health Professions Advisors Optometry

Advisory Council Contact Information

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Date updated: January 2017

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.

OPTOMETRY (O.D.)

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Doctors of Optometry are independent primary health care providers who examine, diagnose, treat and manage diseases and disorders of the visual system, as well as diagnose related systemic conditions. Optometry is among the nation's largest independent healthcare professions with over 33,000 currently employed in the field. According to the American Academy of Ophthalmology, about 150 million Americans use some sort of corrective eye gear.

The number of new practicing optometrists is limited because there are presently only 23 schools and colleges of optometry in the United States and one in Puerto Rico. For the 2016 academic year, 2,812 applicants submitted a total of 13,620 applications for admissions. Employment of optometrists is expected to grow 24% faster than the national average for all occupations through 2022 in response to the vision care needs of a growing and aging population. Most optometrists are in general practice. Employment growth will be fastest in retail optical stores and outpatient clinics. There continues to be a significant need for underrepresented minorities in this profession.

According to the American Optometric Association, the median wage for optometrists in 2016 was \$106,140. The individual net income of optometrists, like that of most professions, tends to rise with the number of years in practice. All states and the District of Columbia require that optometrists be licensed, which requires a Doctor of Optometry (O.D.) degree from an accredited optometry school and a passing score on both a written and a clinical state board examination. Licenses are renewed every 1 to 3 years and continuing education credits are needed for renewal.

OPTOMETRY EDUCATION

The Doctor of Optometry degree is a 4-year program. Optometry programs include classroom and laboratory study of health and visual sciences, as well as clinical training in the diagnosis and treatment of eye disorders. Included are courses in pharmacology, optics, vision science, biochemistry, and systemic disease. Residencies are not required to develop a specialty. Since the four-year optometry curriculum prepares graduates in all areas, a residency does not introduce but rather enhances experiences in a selected area.

ACADEMIC PREPARATION

A student's academic evaluation is based upon overall and science GPA, college attended, degree progress, and course load difficulty. The overall average GPA for the 2014 entering class was 3.31. Before applying to Optometry school, each applicant should become acquainted with at least one optometrist and gain some first-hand experience to see what optometrists do on a daily basis to confirm motivation for entering the field

Letters of Recommendation suggested sources include: An optometrist who can state through documented experience that the applicant knows what the profession of optometry entails, a professor with whom the applicant has done personal work (such as assisted on a specific project or served as a TA or reader), or with whom the applicant took a

course, and an employer or extracurricular activity advisor who can comment about the applicant’s maturity, diligence, and conscientiousness.

The Optometry Admission Test (OAT) must be taken by all applicants seeking admission to schools and colleges of optometry. The OAT is a standardized exam, which consists exclusively of multiple choice questions. There are four components to this exam: Quantitative Reasoning, Reading Comprehension, Survey of the Natural Sciences, and Physics.

COURSE REQUIREMENTS

Prerequisite admission requirements vary from school to school. Please refer to the [Association of Schools and Colleges of Optometry \(ASCO\)](#) for more details.

Most students major in the sciences (biology, chemistry, etc.) because the prerequisites for optometry schools are science intensive and they find a great deal of overlap between major requirements and those required for optometry school, although a science major is not required. Students maintain responsibility for verifying course selection with individual optometry programs.

Listed below are the prerequisite admission requirements for 1 of the 3 Optometry programs in California. Non-science majors, keep-in-mind that the courses listed, may have additional pre-requisites. For all pre-reqs check out [Optometry Programs Admissions Directory](#).

CSULB courses that fulfill admission requirements for [Marshall B. Ketchum University](#):

Coursework	CSULB Courses	Units
Calculus	Math 115 OR 119A OR 122	3
General Biology or Zoology	Biology 211 & 212	6
Microbiology or Bacteriology with lab	Biology 311	3
General Physics with Lab	Physics 100A & 100B OR 151 & 152	8
General Chemistry with Lab	Chemistry 111A & 111B	8
Organic Chemistry	Chemistry 220A	3
Biochemistry	Chemistry 441A OR 448 OR 302	3
Human Anatomy with Lab	Biology 208	3
Human Physiology with Lab	Biology 207 OR 342 w/ 342L	3
Psychology	Psychology 100	3
English Composition & Literature	English 100, 102, OR equivalent	6
Statistics	Statistics 108 OR Psychology 210 OR Biology 260	3

ADDITIONAL RESOURCES

[OptomCAS](#) is the central application service for schools and colleges of optometry. OptomCAS provides applicants with a single web-based application service and an opportunity to apply to more than one participating optometry school or college with one application.

- [Applicants Resource Page](#)
- [Be a Doctor of Optometry: Put Your Future in Focus \(video\)](#)
- [Optometry: A Career Guide \(pdf\)](#)
- [Optometry Programs Admissions Directory](#)

For more information about Optometry, visit www.opted.org and see the HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events.

Optometry

A Career Guide



ASSOCIATION *of*
SCHOOLS *and* COLLEGES
of OPTOMETRY

Acknowledgments

This career guide was written and compiled by the Association of Schools and Colleges of Optometry (ASCO). The guide was written to provide a “core document” that could represent the most current, consistent, and reliable information on optometry as a career for use by prospective students, prehealth advisors, and optometrists who want to share information about their profession with others. The material is intended for use by ASCO and its member schools and colleges in any format that will make information about optometry accessible and available to those who express interest in the profession.

Director, Student and Residency Affairs
Association of Schools and Colleges of Optometry

6110 Executive Boulevard, Suite 420
Rockville, MD 20852
optometriceducation.org

Updated August 2019

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I. DEFINITION OF THE PROFESSION

“Doctors of optometry (ODs) are the independent primary health care professionals for the eye. Optometrists examine, diagnose, treat, and manage diseases, injuries, and disorders of the visual system, the eye, and associated structures as well as identify related systemic conditions affecting the eye” (American Optometric Association [AOA]).

Today, the profession of optometry involves much more than just prescribing and fitting glasses and contact lenses. ODs are trained to evaluate any patient’s visual condition and to determine the best treatment for that condition. ODs are viewed increasingly as primary care providers for patients seeking ocular or visual care.

Conditions typically cared for by ODs are:

- » Corneal abrasions, ulcers, or infections; glaucoma; and other eye diseases that require treatment with pharmaceutical agents, management, and referral when necessary;
- » Visual skill problems such as the inability to move, align, fixate, and focus the ocular mechanism in such tasks as reading, driving, computer use, and in tasks related to hobbies and employment;
- » The inability to properly process and interpret information requiring perception, visualization, and retention such as that needed for most learning tasks;
- » Poor vision-body coordination when one interacts with the environment, as in sports, occupations, and other everyday activities requiring spatial judgments; and
- » Clarity problems such as simple nearsightedness or farsightedness or complications due to the aging process, disease, accident, or malfunction.

ODs also work to:

- » Diagnose, manage, and refer systemic diseases such as hypertension, diabetes, and others that are often first detected in the eye;
- » Provide presurgical and postsurgical care of cataracts, refractive laser treatment, retinal problems, and other conditions that require presurgical and postsurgical care; and
- » Encourage preventative measures such as monitoring infants’ and children’s visual development, evaluating job/school/hobby-related tasks, and promoting nutrition and hygiene education.

II. OUTLOOK FOR THE PROFESSION

According to the U.S. Department of Labor's Bureau of Labor Statistics, job opportunities should be very good over the next decade. With favorable working conditions, regular hours, and a minimum of emergency calls, optometric careers offer many options and great freedom in choosing a location to live and practice. Optometrists provide the majority of primary vision care administered. Even people who may not require corrective eyewear need regular care to prevent, detect, and manage eye disease.

Population Changes and the Optometry Profession

The aging of the U.S. population has had two effects on the practice of optometry. First, many practicing optometrists are approaching retirement age. As the baby-boomer generation enters retirement, many aging optometrists are looking for younger doctors who can take over their practices or offer new areas of emphasis to their practices.

Second, as the population ages, optometry services will be in increasing demand. The growing numbers of senior citizens with age-related eye diseases such as cataracts, glaucoma, diabetic retinopathy, hypertensive retinopathy, and macular degeneration will require increased services from optometrists.

Senior citizens are in a better position to consult optometrists following a change in the Medicare law in 1987, which authorized reimbursement to optometrists. Primary eye care examinations for individuals over the age of 65 performed by optometrists have increased since the Medicare law was passed.

Another milestone in optometric care was the Affordable Care Act (ACA). The Harkin Amendment that is part of the ACA made it against the law for health insurance companies to discriminate against optometrists for vision care. In addition, every insurance policy available must cover comprehensive eye exams for children up to age 18. This requirement is called the Pediatric Eye Care Essential Benefit.

Social and Legal Changes Affecting Optometry

ODs are highly valued by a population that is increasingly conscious of the benefits of good health and regular vision care. Rising personal incomes, ACA, and Medicare coverage for optometry services make regular eye care provided by optometrists even more desirable and affordable.

As society becomes more mechanized and digital, vision requirements become more exacting. The number of persons needing professional help for near-point visual tasks, including both older patients and school-children, is steadily growing. Increased demands for vision care result not only from population changes, but also from an increased understanding of how good vision relates to driving, workplace requirements, student achievement, leisure activities, adjustments to aging, and other areas crucial to a modern computer and technology-driven society.

Demand for optometry services is also expected to increase as state laws, which regulate optometric practice (similar to all medical professions), have expanded to place responsibilities for virtually all primary eye care services on optometrists. All states in the United States recognize that optometrists are trained to prescribe medications to treat eye diseases.

Most new opportunities for graduates are created by the retirement of optometrists, the establishment of new offices, the inclusion of optometrists in interdisciplinary practices, and the growth of group practices, in addition to the expanding scope of care provided by optometrists. There has also been an increase in the number of corporate optometry locations, which has created demand for optometrists.

The number of new practicing optometrists is limited by the fact that there are 23 schools and colleges of optometry in the United States and Puerto Rico, with two additional schools in Canada. Class sizes are restricted; therefore, the number of new graduates remains fairly constant. Federal data indicate employment of optometrists is projected to grow 18% through 2026. Because vision problems tend to occur more frequently later in life, an aging population will require more optometrists. As people age, they become more susceptible to conditions that impair vision such as cataracts and macular degeneration. In addition, an increasing number of insurance plans provide some vision or eye care coverage. Furthermore, the number of individuals, particularly children, who have vision or eye care insurance will increase as a result of federal health insurance reform legislation. Because the number of optometrists is limited by the number of accredited optometry schools, licensed optometrists should expect good job prospects, as cited by the U.S. Department of Labor's Bureau of Labor Statistics in the Occupational Outlook Handbook, 2019 edition.

Professional Satisfaction

Practicing ODs experience keen satisfaction in their profession. The fact that many optometrists choose to practice on a part-time basis well into their retirement speaks highly of the rewards of the profession.

Adding to optometrists' satisfaction is the fact that they have a great work/life balance with a great salary. Over the years, optometrists have expanded their services to include more eye-health-related procedures, which assist their patients and have enabled their practices to grow.



III. NEW FRONTIERS IN EYE CARE

New technologies have helped the profession of optometry to expand both the scope and the efficiency of practice. Optometrists and their patients are benefiting from the many advances in eye care and medical technology.

There has been a significant increase in the use of new and relatively new lens treatments, designs, and corrective materials such as contact lenses. Today, millions of people wear contact lenses.

Lasers

Lasers have been used for many years for treating eye diseases (e.g., diabetes, macular degeneration, glaucoma, and some forms of cataracts) and for help with diagnosing visual problems. In recent years, the use of lasers to correct forms of refractive errors (near-sightedness, farsightedness, or astigmatism) has been increasing. Traditionally, these conditions were correctable only with glasses, contact lenses, and invasive surgery.

ODs play a key role in helping patients determine whether they are candidates for new procedures in laser surgery. When laser surgery is appropriate for a patient, optometrists provide nearly all preoperative and postoperative care. Kentucky, Oklahoma, and Louisiana were the first three states to allow optometrists to perform certain laser surgeries.

Instrumentation

Technology is rapidly improving diagnostic instruments used by all health care practitioners. More accurate and efficient test results enable ODs to better diagnose, manage, and treat eye disorders and diseases. Technology also helps optometrists educate patients about their conditions—long a hallmark of the profession—and allows patients to participate in their care and treatment decisions.

Medication

New medications are developed each year that optometrists use to treat diseases of the human eye. This area, perhaps more than any other, reinforces the need for a well-rounded continuing education because it serves as the foundation of an OD's lifelong service in a modern health care delivery system.

IV. MODES OF PRACTICE

Optometrists practice in many different kinds of situations and with different types of employers.

Individual Private Practice

The individual private practitioner usually is a primary care optometrist with a stand-alone practice. Such practitioners may specialize in fields such as:

- » Contact lenses,
- » Pediatrics,
- » Low vision/geriatrics, and
- » Vision therapy.

An individual practice may be in a variety of settings and locations, ranging from a free-standing to a professional building.

Partnership or Group Practice

This mode of practice is very similar to an individual practice except that there are two or more optometrists in the group. Each member of the group may specialize in a different area of practice. This is an increasingly popular form of practice.

Retail/Optical Settings

In this setting, optometrists usually rent space from or are employed by a large retail outlet. However, they remain independent practitioners.

Optometric/Ophthalmologic Professional Settings

The optometrist practices in conjunction with the ophthalmologist and manages the patients in this setting.

Military/Public Health

Optometrists are commissioned officers who work in a hospital or clinical setting with other health care practitioners.

Interdisciplinary Care

The optometrist works with other health care practitioners in a hospital-based or clinic setting, such as in a Department of Veterans Affairs (VA) hospital, as part of an interdisciplinary team.

Academic/Research

The OD teaches about primary care and/or performs research in a university setting. Academics pursue additional training after optometry school and have completed a residency, or a master of science or doctoral program.

Corporate/Industrial

Optometrists are employed by large corporations to perform clinical research or to provide patient care in a clinic within the corporate setting.

Consultants

Optometrists work as consultants to the ophthalmic industry, education, sports (high school to professional), and government.

V. INCOME POTENTIAL

Optometrists enjoy the benefits of financial security, independence, and recognition in their communities. Optometry is often rated an “excellent” career choice because of its expectations for job growth, earnings potential, and the opportunity for meaningful work and good quality of life.

Data from the American Optometric Association shows an average net income of \$143,520 for optometrists.



**AMERICAN
OPTOMETRIC
ASSOCIATION**

VI. OPTOMETRY AREAS OF EMPHASIS

Most ODs practice “full-scope,” primary care optometry and treat and manage all forms of visual and ocular conditions. However, a practitioner may choose to concentrate his/her practice on treating a selected population or visual condition.

Residencies are not required to develop an area of emphasis. Because the four-year optometry curriculum prepares graduates in all areas, a residency does not introduce but enhances experience in a selected area.



These areas of emphasis include:

Family Practice Optometry: The clinical and didactic curricula will be devoted to topics and practice broadly represented in general optometric care. The patient population will include an age range from pediatric to geriatrics.

Primary Eye Care: The majority of the clinical and didactic curricula will be devoted to topics and practice relevant to the program's unique patient population. This patient population may be evident in the title, e.g., Primary Eye Care-Dept. of Veteran Affairs, Primary Eye Care-Indian Health Services.

Cornea and Contact Lenses: The majority of the clinical and didactic curricula will be devoted to topics and practice prevalent in the cornea and contact lens population.

Geriatric Optometry: The majority of the clinical and didactic curricula will be devoted to topics and practice prevalent in the geriatric population.

Pediatric Optometry: The majority of the clinical and didactic curricula will be devoted to topics and practice prevalent in the pediatric population.

Vision Therapy and Rehabilitation: The majority of the clinical and didactic curricula will be devoted to topics and practice relevant to dysfunctions of eye movement, accommodative, binocular and perceptual systems, reduced visual acuity, and compromised visual fields.

Low Vision Rehabilitation: The majority of the clinical and didactic curricula will be devoted to topics and practice relevant to low vision patients.

Ocular Disease: The majority of the clinical and didactic curricula will be devoted to topics and practice relevant to the diagnosis, management, and treatment of ocular disease.

Refractive and Ocular Surgery: The majority of the clinical and didactic curricula will be devoted to topics and practice relevant to refractive and ocular surgery.

Community Health Optometry: The clinical and didactic curricula will be devoted to community-based optometric care with an emphasis on public health and cultural issues that impact care.

Brain Injury Rehabilitation: The majority of the clinical and didactic curricula will be devoted to topics and practice relevant to assessment, management, and interdisciplinary rehabilitation of patients with brain injury and neurologic disease.

VII. A TYPICAL DAY IN THE LIFE OF AN OD

Each workday is different for ODs, and the scope and mode of practice in which the doctor are engaged can make the differences even more pronounced. If he/she specializes, the day is filled with evaluating new patients and providing the treatment particular to the area of emphasis. If the doctor is a member of a group practice, he/she may be the specialist in that group for certain kinds of patients or conditions. If the doctor



is involved in a more commercial practice or as an employee, he/she may be limited by the dictates of the corporation or employer. If the doctor chooses to provide care in a nursing home or makes house calls, the patient demands and instrumentation available to him/her are different from the doctor who consults in a hospital or a grade school. The self-employed doctor or a partner in a group practice can more easily set his/her own hours, whereas the doctor employed in other settings is less able to do so.

Most ODs are “generalists” and, assuming they provide full-scope primary optometric care, their day can be quite varied and challenging. Patient interaction can include performing routine visual exams, removing a foreign body from the cornea, evaluating a child who is not performing well in school, fitting contact lenses, prescribing medication for glaucoma, providing follow-up care after refractive surgery, and/or fitting a patient who is legally blind with a magnifying device that enables the patient to read.

Typically, the doctor works with a technician who administers preliminary tests, advises patients on the use and care of contact lenses, and assists patients in selecting frames. The doctor spends time with the patient, gathering more information, testing, making a diagnosis, determining the treatment required, and discussing the treatment regimen with the patient. The doctor records all information into the patient’s record, dictating letters of referral if conditions such as diabetes or hypertension are detected or letters to schools reporting on a child’s visual status. An office manager or receptionist (depending on the size of the practice) may take care of completing information required by the patient’s health insurance provider.

VIII. FUNCTIONAL STANDARDS FOR AN ADMISSIONS CANDIDATE TO CONSIDER

Following are the Functional Standards for Didactic and Clinical Optometric Education. The Board of Directors of ASCO developed these standards in 1998 and revised them in 2009. Although developed for several reasons, the functional standards give prospective students an accurate idea of the skills required to perform the duties of an optometrist.

To provide guidance to those considering optometry as a profession, ASCO has established functional guidelines for optometric education. The ability to meet these guidelines, along with other criteria established by individual optometric institutions, is necessary for graduation from an optometric professional degree program.

One of the missions of each school and college of optometry is to produce graduates fully qualified to provide quality comprehensive eye care services to the public. To fulfill this mission, each institution must ensure that students demonstrate satisfactory knowledge and skill in the provision of optometric care. Admission committees, therefore, consider a candidate's capacity to function effectively in the academic and clinical environments, as well as a candidate's academic qualifications and personal attributes.

The functional guidelines in optometric education require that the candidate/student possess appropriate abilities in the following areas:

1. Observation;
2. Communication;
3. Sensory and motor coordination;
4. Intellectual-conceptual, integrative and quantitative abilities; and
5. Behavioral and social attributes.

Each of these areas is described in this document.

In any case where a student's abilities in one of these areas are compromised, he or she must demonstrate alternative means and/or abilities to meet the functional requirements. It is expected that seeking and using such alternative means and/or abilities shall be the responsibility of the student. Upon receipt of the appropriate documentation, the school or college will be expected to provide reasonable assistance and accommodation to the student.

Observation Abilities

The student must be able to acquire a defined level of required knowledge as presented through lectures, laboratories, demonstrations, patient interaction and self-study. Acquiring this body of information necessitates the functional use of visual, auditory and somatic sensation enhanced by the functional use of other sensory modalities. Examples of these observational skills in which accurate information needs to be extracted in an efficient manner include:

Visual Abilities:

(as they relate to such things as visual acuity, color vision and binocularity)

- » Visualizing and reading information from papers, films, slides, video and computer displays
- » Observing optical, anatomic, physiologic and pharmacologic demonstrations and experiments
- » Discriminating microscopic images of tissue and microorganisms
- » Observing a patient and noting non-verbal signs
- » Discriminating numbers, images, and patterns associated with diagnostic tests and instruments
- » Visualizing specific ocular tissues in order to discern three-dimensional relationships, depth and color changes

Auditory Abilities:

- » Understanding verbal presentations in lecture, laboratory and patient settings
- » Recognizing and interpreting various sounds associated with laboratory experiments as well as diagnostic and therapeutic procedures

Tactile Abilities:

- » Palpating the eye and related areas to determine the integrity of the underlying structures
- » Palpating and feeling certain cardiovascular pulses

Communication Abilities

The student must be able to communicate effectively, efficiently and sensitively with patients and their families, peers, staff, instructors and other members of the health care team. The student must be able to demonstrate established communication skills using traditional and alternative means. Examples of required communications skills include

- » Relating effectively and sensitively to patients, conveying compassion and empathy
- » Perceiving verbal and non-verbal communication such as sadness, worry, agitation and lack of comprehension from patients
- » Eliciting information from patients and observing changes in mood and activity
- » Communicating quickly, effectively and efficiently in oral and written English with patients and other members of the health care team
- » Reading and legibly recording observations, test results and management plans accurately
- » Completing assignments, patient records and correspondence accurately and in a timely manner

Sensory and Motor Coordination Abilities

Students must possess the sensory and motor skills necessary to perform an eye examination, including emergency care. In general, this requires sufficient exteroception sense (touch, pain, temperature), proprioceptive sense (position, pressure, movement, stereognosis, and vibratory) and fine motor function (significant coordination and manual dexterity using arms, wrists, hands and fingers). Examples of skill required include but are not limited to:

- » Instillation of ocular pharmaceutical agents
- » Insertion, removal and manipulation of contact lenses
- » Assessment of blood pressure and pulse
- » Removal of foreign objects from the cornea
- » Simultaneous manipulation of lenses, instruments and therapeutic agents and devices
- » Reasonable facility of movement
- » Injections into the eye, lids or limbs

Intellectual-Conceptual, Integrative and Quantitative Abilities

Problem solving, a most critical skill, is essential for optometric students and must be performed quickly, especially in emergency situations. In order to be an effective problem solver, the student must be able to accurately and efficiently utilize such abilities as measurement, calculation, reasoning, analysis, judgment, investigation, memory, numerical recognition and synthesis. Examples of these abilities include being able to:

- » Determine appropriate questions to be asked and clinical tests to be performed
- » Identify and analyze significant findings from history, examination, and other test data
- » Demonstrate good judgment and provide a reasonable assessment, diagnosis and management of patients
- » Retain, recall and obtain information in an efficient manner
- » Identify and communicate the limits of one's knowledge and skill

Behavioral and Social Attributes

The student must possess the necessary behavioral and social attributes for the study and practice of optometry. Examples of such attributes include:

- » Satisfactory emotional health required for full utilization of one's intellectual ability
- » High ethical standards and integrity
- » An empathy with patients and concern for their welfare
- » Commitment to the optometric profession and its standards
- » Effective interpersonal relationships with patients, peers and instructors
- » Professional demeanor
- » Effective functioning under varying degrees of stress and workload
- » Adaptability to changing environments and uncertainties
- » Positive acceptance of suggestions and constructive criticism

Candidates with questions or concerns about how their own conditions or disabilities might affect their ability to meet these functional guidelines are encouraged to meet with an optometry school counselor prior to submitting an application.

IX. THE OPTOMETRY CURRICULUM

Students must successfully complete a four-year accredited degree program at a school or college of optometry to earn the OD degree.

The sequence of course work varies from one program to another, but some general characteristics are shared by all. In the first and second year of the professional program, course work is concentrated in the basic health sciences (anatomy, physiology, pathology, biochemistry, pharmacology, and public health), optics, and vision science. Students begin their clinical experience in a clinical simulation laboratory, with classmates serving as patients, and then proceed to clinical training with real patients. This training includes taking case histories, performing examinations, learning diagnostic techniques, and discussing treatment services.

In the third year, students spend part of their time in the classroom and part of their time in the clinic examining patients.

Fourth-year students continue their clinical training, which may include off-campus clinical externship rotations. Sites for rotation are available in the United States and abroad. Clinic settings include military facilities, VA hospitals, public health service hospitals, and various specialty and private practices. The lengths of the external rotations vary from eight to 16 weeks.

After successfully completing the fourth year, students graduate with an OD degree. To ensure a better understanding of the different educational programs, contact the specific schools or colleges of interest for curricular details.



Students graduating from schools and colleges of optometry have access to numerous resources that provide optometry practice (placement) opportunities. Students may obtain information from individual schools and colleges of optometry, state optometry associations, and the Optometry Career Center, which is housed at the AOA office in St. Louis, Mo., (www.aoa.org).

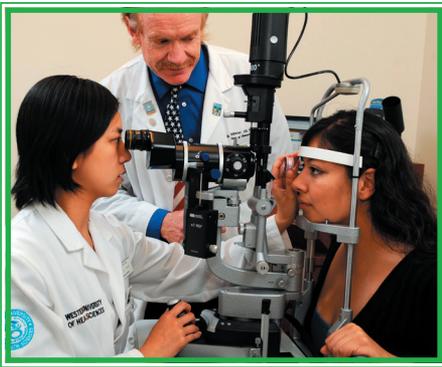
X. BECOMING LICENSED TO PRACTICE OPTOMETRY

Optometrists need to be licensed by the board of optometry in each state where they wish to practice optometry. Licensing assures that optometrists have met established standards of knowledge and are able to provide patient care. All states either accept or require passage of Parts I, II, and III of the National Board examinations offered by the National Board of Examiners in Optometry (NBEO).

Part I (Applied Basic Science) tests epidemiology, patient's history, presenting symptoms and signs, clinical testing, diagnosis and pathophysiology knowledge obtained from the first two years of optometric study. Part II (Patient Assessment and Management) tests knowledge of clinical science through patient simulations. Part III (Clinical Skills) is a distinctive clinical skills examination requiring fundamental skills that reflect actual practice.

Each state has its own set of regulations governing the practice of optometry, and many states also require additional examinations that tests the applicant's knowledge.

Student candidates in the final year of graduation at an accredited institution are eligible to take the Part III examination. While most student candidates will be taking this examination before they officially graduate, an individual candidate's official score report from the Part III examination will not be released until the National Board receives notification from the candidate's institution that the candidate has graduated and after the final graduation exercises of all the institutions accredited by the Accreditation Council on Optometric Education in the summer.



Periodic renewal of a license to practice optometry is required, depending on the state. Requirements for re-licensure can be fulfilled through continuing education or other modes.

Postgraduate Programs

Residencies

Residencies in the profession of optometry are optional and not required—either for licensure or for the establishment of a specialty practice. The four-year OD degree encompasses all areas in which optometrists are licensed to practice. After a student receives the OD degree, residencies are typically one year in duration and the resident receives a salary during this course of clinical training. Most often, residencies are located within hospitals, VA facilities, outpatient clinics, or the clinical facilities of the various colleges and schools of optometry. Residencies vary within areas of emphasis and typically are identified by specific areas in the profession or at a location in which the area is emphasized. (See **VI. Optometry Areas of Emphasis**)

Graduate Degree Programs

Graduate programs are not required to be licensed to practice optometry. In fact, these programs usually are research-oriented and are for the individual interested in delving further into the “whys” and “hows” of the visual system.

A master’s degree can be sought by someone who has an OD degree or who is simultaneously working on the OD degree. This individual usually plans to practice optometry but also wishes to be grounded in the basics of research to do some clinical research within his or her practice.

A PhD degree is most often sought by someone intending to go into full-time research and/or teaching. For those possessing a PhD, opportunities exist not only to teach and do research at a college or university but to engage in research within the corporate and government sectors. Individuals can enter these programs with or without an OD degree. Some choose to work on both the OD and the PhD at the same time, taking approximately six to seven years to complete both degrees.

Graduate degree programs at schools and colleges of optometry are identified by different names, but all emphasize and explore some aspect of vision and the visual and ocular system.

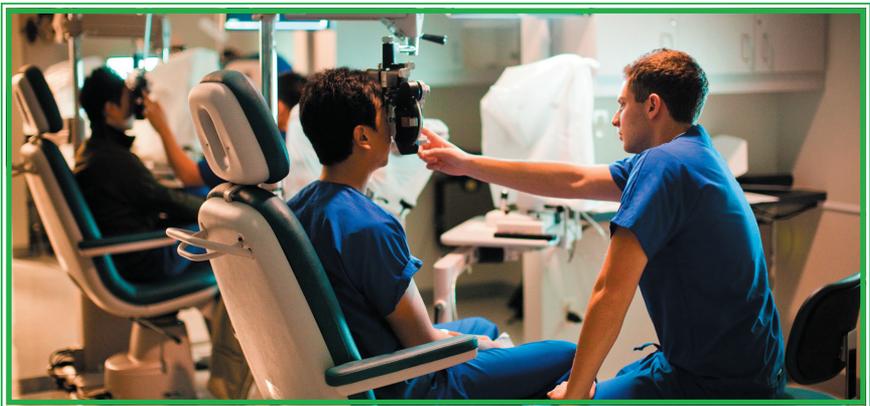
XI. ADMISSION REQUIREMENTS

Because each optometry school may have slightly different admissions criteria, it is strongly recommended that applicants contact all the schools and colleges to which they are interested in applying. Each school can provide information on specific application deadlines, additional policies and procedures, class size, grade point average (GPA), Optometry Admission Test (OAT) averages, international requirements, and tuition and fees considerations. A complete listing of the schools and colleges of optometry is provided by ASCO at optometriceducation.org.

No valid ranking of optometry schools exists. The best advice to a candidate is to obtain information from the individual schools, talk to recent graduates, visit selected schools, and ask pointed questions of faculty and students.

Candidates should be most concerned with the academic rigor of a program, the clinical experience offered, and the availability of faculty and support services. Of course, the cost of the program, availability of financial aid, and the location and environment of the college can be contributing factors in deciding which program is best suited to the candidate.

In general, colleges of optometry admit students who have demonstrated strong academic commitment and who exhibit the potential to excel in deductive reasoning, interpersonal communication, and empathy. Optometry schools are looking for well-rounded candidates who have achieved not only in the classroom but also in other areas. Leadership ability, a disposition to serve others, and a work ethic characterized by dedication and persistence are just a few of the qualities that impress most admission committees.



OptomCAS

Optometry's centralized application service (OptomCAS) launched in July 2009. OptomCAS allows optometry school applicants to use a single web-based application and one set of materials to apply to multiple schools and colleges of optometry. Applicants who apply through OptomCAS submit a completed web-based application comprised of biographical data, colleges and universities attended, academic course history, letters of recommendation, work experience, extracurricular activities, honors, and a personal essay. It is the applicant's responsibility to read and follow specific instructions for OptomCAS and the schools and colleges of optometry. More information can be found on the OptomCAS website at www.optomcas.org.

A student's academic evaluation is based on overall GPA, science GPA, college attended, degree progress, and course load difficulty. A bachelor's degree is not required by some optometry schools but is strongly preferred. Most students major in the natural sciences in college (e.g., biology, chemistry) because the prerequisites for optometry school are science intensive. However, prospective students can major in any degree discipline as long as they complete all of the prerequisite courses for optometry.

Listed below are the common prerequisite courses for most optometry schools:

- » General biology with labs,
- » General chemistry with labs,
- » Organic chemistry/biochemistry with labs,
- » General physics with labs,
- » Microbiology with labs,
- » Calculus,
- » Psychology,
- » Statistics,
- » English,
- » Social science, and
- » Other humanities.

Most schools consider an applicant's exposure to optometry to be of vital importance. Each applicant should become acquainted with at least one optometrist and if possible gain some firsthand experience to see what optometrists do on a daily basis. Most schools require personal interviews for admission, and experience/exposure to the field is often a topic for discussion.

Optometry Admission Test (OAT) and Other Standardized Exams

All schools and colleges of optometry will accept the OAT. Many schools and colleges will also accept the GRE, MCAT, DAT, or PCAT in lieu of the OAT. Applicants are encouraged to contact the schools and colleges for their exam requirements.

The OAT is a standardized examination designed to measure general academic ability and comprehension of scientific information. It consists of four subtests: Survey of the Natural Sciences (Biology, General Chemistry, and Organic Chemistry), Reading Comprehension, Physics, and Quantitative Reasoning. The OAT is scored on a 200-to 400-point scale in increments of 10. The national average for the test is generally between 300 and 310.

At least one year of college education, which should include courses in biology, general chemistry, organic chemistry, and physics, is required prior to taking the OAT. Most students, however, elect to complete two or more years of college prior to taking the exam.



XII. FINANCING AN OPTOMETRIC EDUCATION

Students who are considering a career as an optometrist may be concerned that they do not have sufficient personal resources to cover all of the educational costs. The cost of attendance generally includes tuition, fees, books, equipment and supplies, and living expenses such as rent, groceries, insurance, and transportation. The majority of students finance their education by a combination of personal and family contributions, scholarships, low- and high-interest loans, and work-study opportunities.

As the overall costs of optometric education continue to increase, it is important that prospective optometry students begin to investigate potential financial aid sources as early as possible. Because outside employment during optometry school is a limited option for the majority of students, and university sources of funds are also often limited, accepted applicants should contact their school's financial aid office early to explore their options and understand the school's financial aid policies and procedures.

Sources of Financial Aid

Accepted applicants should be aware of loans, scholarships, grants, and work-study, which provide the majority of aid to optometry students.

Loans, which are the primary source of financial aid for optometry students, must be repaid after graduation. Scholarships, which are merit-based or need-based, do not require the recipient to repay the award. Work-study gives students the opportunity to work part-time. In addition, there are state contract programs, which pay a portion of a student's tuition, and U.S. Armed Forces' scholarship programs, which require a service commitment following graduation.

The following list presents an overview of the most commonly used federal sources of assistance. Applicants are cautioned that requirements for the various loan programs may change or programs may be eliminated based on actions of the government.



Loan Programs

- » Federal Direct Loan Unsubsidized,
- » U.S. Department of Health & Human Services (DHHS) Loans for Disadvantaged Students (LDS),
- » DHHS Health Professions Student Loan (HPSL),
- » Federal Graduate PLUS loans,
- » Private alternative loans, and
- » Institutional loan programs (limited).

Scholarship Programs

- » DHHS Scholarships for Disadvantaged Students (SDS),
- » State contracts,
- » Military Health Professions Scholarship, and
- » Institutional scholarship programs.

Applying for Financial Aid

The federal government and the optometry schools sponsor the majority of financial aid money available to optometry students. The applicant should begin by contacting the optometry schools he/she would like to attend. They will provide the applicant with information on the programs they offer as well as forms and deadline dates. The following list identifies the forms and information generally required.

1. **Free Application for Federal Student Aid (FAFSA)**

This is the most important form because the information from it is used to calculate the applicant's expected family contribution and to determine eligibility for federal sources of financial aid. The FAFSA asks for information about the applicant, the applicant's spouse, and the applicant's parents. Although an applicant may be financially independent from his/her parents, parents may still need to fill out sections of the FAFSA because certain financial aid programs require that this information be considered. This form is submitted online at www.fafsa.ed.gov. There is no processing fee for the FAFSA.

2. **Institutional Application**

In addition to the FAFSA, optometry schools may require an institutional form, which is returned directly to the school. Schools do not charge processing fees for their financial aid forms.

3. **Tax Returns**

Students can use the IRS Data Retrieval Tool on the FAFSA to upload income tax data. Parental tax form copies may be requested for DHHS programs.

4. **Certifications**

Students receiving funds, especially from federal sources, must attest to certain eligibility requirements. For example, the student will need to vouch that funds were used only for educational purposes, that the student is not in default on a loan and that the student is in compliance with Selective Service registration requirements.

Managing Educational Indebtedness

The majority of optometry students borrow to pay for the cost of their education. Borrowing means the student has the benefit of using someone else's money now in exchange for paying it back with interest at a later date. Students are legally obligated to repay their loans. Defaulting on a student loan has financial and legal consequences that can have negative personal and professional effects. The vast majority of optometry graduates repay their loans either on time or early. The financial aid office at a specific college can provide information on management of a student's debt.



Resources:

American Optometric Association, <http://www.aoa.org/> August 2019.

American Optometric Association. *2018 AOA Survey on Optometric Practice*.

U.S. Department of Labor, Bureau of Labor Statistics. *Occupational Outlook Handbook, Edition 2019*. Washington, DC.



Association of Schools and Colleges of Optometry

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Association of Schools and Colleges of Optometry

Profile of the 2019 Optometry Entering Class

School	# first-year slots (no transfer or repeat)	# Matriculants (Regular only-no transfer or repeat)			Average GPA	AA ¹ Average OAT	TS ² Average OAT	% with Bachelor's Degree	# In-State	# Out-of-State (Domestic)	# Foreign Country	# States Represented
		Male	Female	Total								
ALABAMA Univ of AL at Birmingham, School of Optometry	45	18	27	45	3.66	321	315	93.0%	17	28	0	14
ARIZONA Ariz College of Optometry, Midwestern University	57	26	31	57	3.41	319	314	100.0%	9	46	2	22
CALIFORNIA Southern CA Coll of Opt at Marshall B. Ketchum Univ	104	29	75	104	3.32	334	331	97.0%	83	18	3	14
CALIFORNIA Univ of Calif, Berkeley-School of Optometry	68	14	54	68	3.42	355	357	100.0%	53	13	2	10
CALIFORNIA Western Univ of Health Sci, Coll of Optometry	86	19	50	69	3.17	300	293	92.8%	42	23	4	15
FLORIDA Nova Southeastern Univ, College of Optometry	94	32	62	94	3.43	323	320	95.0%	49	38	7	22
ILLINOIS Chicago College of Optometry, Midwestern University	60	20	41	61	3.21	296	285	95.0%	23	37	1	18
ILLINOIS Illinois College of Optometry	124	38	86	124	3.42	326	323	96.3%	33	62	29	23
INDIANA Indiana University, School of Optometry	85	22	63	85	3.58	317	308	95.0%	38	46	1	19
KENTUCKY Univ of Pikeville, Kentucky College of Optometry	62	15	47	62	3.31	296	279	96.7%	14	48	0	23
MASSACHUSETTS MCPHS University, School of Optometry	59	16	43	59	3.22	307	301	98.0%	14	42	3	22
MASSACHUSETTS New England College of Optometry	132	36	102	138	3.37	326	322	97.0%	29	69	40	23

¹AA Average OAT - Average Score of Academic Average OAT

³Biology, Chemistry and Physics GPA as calculated by OptomCAS.

²TS Average OAT - Average Score of Total Science OAT

Association of Schools and Colleges of Optometry

Profile of the 2019 Optometry Entering Class

School	# first-year slots (no transfer or repeat)	# Matriculants (Regular only-no transfer or repeat)			Average GPA	AA ¹ Average OAT	TS ² Average OAT	% with Bachelor's Degree	# In-State	# Out-of-State (Domestic)	# Foreign Country	# States Represented
		Male	Female	Total								
MICHIGAN Michigan Coll of Opt at Ferris State Univ	38	10	28	38	3.75	339	338	65.8%	30	4	4	5
MISSOURI Univ of Missouri at St. Louis, Coll of Optometry	45	19	27	46	3.42	314	304	98.0%	14	32	0	15
NEW YORK State Univ of New York, College of Optometry	98	28	70	98	3.59	346	350	91.0%	55	40	3	16
OKLAHOMA Northeastern State University, Oklahoma College of	28	12	16	28	3.72	317	308	96.4%	15	13	0	5
OHIO The Ohio State Univ, College of Optometry	68	27	41	68	3.65	339	335	97.0%	32	35	1	19
OREGON Pacific University, College of Optometry	94	29	65	94	3.51	327	322	90.0%	13	58	23	17
PENNSYLVANIA⁴ Salus Univ Pennsylvania College of Optometry	149	38	111	149	3.36	305	298	93.0%	36	101	12	25
PUERTO RICO Inter American Univ, School of Optometry	60	20	34	54	3.04	284	269	98.0%	12	39	3	15
TENNESSEE Southern College of Optometry	135	39	96	135	3.61	336	332	100.0%	15	117	3	31
TEXAS Univ of the Incarnate Word, Rosenberg School of	68	19	50	69	3.34	308	298	97.0%	39	28	2	17
TEXAS University of Houston, College of Optometry	103	36	67	103	3.59	340	340	100.0%	79	23	1	17

¹AA Average OAT - Average Score of Academic Average OAT

²TS Average OAT - Average Score of Total Science OAT

⁴The above figures reflect Salus/PCO's traditional entering class. The figures for Salus/PCO's Scholars Program are as follows:

SCHOLARS PROGRAM	13	8	5	13	3.7	350	350	100%	4	5	4	6
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Pharmacy

General Description:

Pharmacists are essential healthcare professionals, who enhance patient care and promote wellness. When pharmacists are involved in patient care, outcomes improve and costs decline. Current pharmacy graduates receive a minimum of six years of rigorous professional education, leading to the Doctor of Pharmacy (Pharm.D.) degree. Pharmacy is a diverse and rewarding career, with opportunities for patient care, scientific research and innovation. In short, pharmacists help people live healthier, better lives.

What are some common daily activities/experiences?

While responsibilities vary among the different areas of pharmacy practice, the bottom line is that pharmacists help patients get well. Pharmacist responsibilities include a range of care for patients, from dispensing medications to monitoring patient health and progress to maximize their response to the medication. Pharmacists also educate consumers and patients on the use of prescriptions and over-the-counter medications, and advise physicians, nurses, and other health care professionals on drug decisions. Pharmacists also provide expertise about the composition of drugs, including their chemical, biological, and physical properties and their manufacture and use. Pharmacists ensure drug purity and strength and make sure that drugs do not interact in a harmful way. They are the drug experts ultimately concerned about their patients' health and wellness.

Pharmacists are increasingly becoming involved in patient care. Pharmacists are stepping in to fill the void of primary health care professionals, especially in integrated health care systems; physicians are now identifying patient goals and communicating them to pharmacists, who then develop the appropriate treatment plans. Pharmacists working for national chains provide immunizations, conduct screenings for a variety of health conditions, counsel patients about the growing number of new medications, and provide basic medical advice.

What are 3-5 personal characteristics important for happiness and success in your profession?

- **Critical thinking skills** to analyze information from multiple sources for the purpose of determining the effects of medication therapy on patients, identifying medication problems, and prioritizing the health-related needs of patients.
- **Good communication and interpersonal skills** to speak with patients about their health history and educate them on how to properly take their medications, use devices to administer medications, self-monitor their conditions, and make good lifestyle choices.
- **Collaboration skills** to work with other healthcare professionals to determine the best treatment plan for a patient.
- **Commitment to care** to perform health screenings, administer immunizations to patients, prevent drug interactions and side effects, ensure patient safety, provide medication expertise, and more.
- **Integrity** to uphold the moral obligations and virtues of the pharmacy profession in relationships with patients, health professionals, and society.

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- What makes you interested in pharmacy? (Advisors can correct misconceptions like pharmacists don't touch people, never deal with blood, etc.)
- How comfortable are you with change? Have you explored the ways the role of pharmacists have evolved as healthcare has changed?

NAAHP Fact Sheet for Health Professions Advisors

Pharmacy

- Are you comfortable working in a team environment?
- What attributes (other than a strong math/science background) do you have that you can bring to the pharmacy profession that could help to advance healthcare?

Preparing for Admission:

- **Academic:**
 - The undergraduate prerequisites vary significantly from one institution to the next. Due to the variations in admission requirements and procedures among the colleges and schools of pharmacy, it is advisable to research different pharmacy programs. Visit the PharmCAS Directory or pharmacy school web sites to view course requirements. School specific information is also available in the AACP annual publication, "Pharmacy School Admission Requirements" (PSAR).
 - Common/core Courses
 - General Chemistry I & II, Organic Chemistry I & II
 - General Biology I & II, Anatomy and Physiology, Microbiology
 - Physics
 - Calculus
 - English I & II
 - Public Speaking
 - Additional (that are generally subject to individual schools, but frequent enough)
 - Psychology
 - Behavioral statistics
 - For specifics by program, see <http://www.pharmcas.org/school-directory/#/pharmd/general-information>
- **Standardized Test(s):**
 - The Pharmacy College Admission Test (PCAT) was specifically for pharmacy colleges. It measures general academic ability and scientific knowledge necessary for the commencement of pharmaceutical education. www.pcatweb.info
 - Most pharmacy schools required the PCAT for admission. Visit the PharmCAS Directory to determine PCAT requirements per school.
- **Pharmacy Experience/Exposure:**
 - Pharmacy colleges encourage or require applicants to have volunteer or paid experience working with patients in a pharmacy or health-related setting (hospital, nursing home, etc.). Ongoing work or volunteer experience in a pharmacy setting may be an important factor in the admissions process. If you are unable to gain work or volunteer experience directly related to pharmacy, contact your selected pharmacy school admission offices to determine what other healthcare experiences they might accept that will adequately demonstrate your knowledge of the profession.
- **Letters of Recommendation:**
 - Many pharmacy degree programs require 1-4 letters. Some may require you to submit letters from a pharmacist, professor or academic advisor. If letters are required, select individuals who know you well and can speak to your maturity, dependability, dedication, compassion, communication-skills, leadership and any hands-on experience in the field. Your selected pharmacy schools may require your evaluators to use a school-specific evaluation form in lieu or in addition to the letter from the evaluator. Pharmacy schools generally require evaluators to submit and sign letters on the evaluator's official letterhead. Review the admission requirements of each pharmacy school for instructions.

NAAHP Fact Sheet for Health Professions Advisors

Pharmacy

- **Resources for researching schools:**
 - Pharmacy School Admission Requirements (PSAR) at www.aacp.org/resource/pharmacy-school-admission-requirements
 - PharmCAS Directory at www.pharmcas.org/school-directory/

The Admissions Cycle:

- CAS(es): Pharmacy College Application Service (**PharmCAS**), www.pharmcas.org
 - Application opens: July
 - Application deadlines: Between November and June
 - Application system closes: June
 - Number of schools participating: 132 of the 143 pharmacy schools
 - Fees:
 - \$175 for the first designation
 - \$55 for each additional designation
 - Fee waivers: A limited number of fee waivers are available to those with financial need.
 - Letters of Reference: Send up to 4 references to PharmCAS via the Evaluator Portal. Applicants applying to non-PharmCAS schools must send them directly to the institution.
 - Standardized test logistics: Send PCAT, TOEFL, & TSE scores to PharmCAS, if required. (PCAT not required by all pharmacy schools).
 - Transcripts: Send official transcripts to PharmCAS. Policies for Int'l transcripts vary.
 - Background checks and drug screening may be required of accepted applicants.
 - Instruction: <http://www.pharmcas.org/preparing-to-apply/application-instructions/>
 - Contact information: 617-612-2050, info@pharmcas.org
- PharmCAS Facebook: www.facebook.com/PharmCAS
- PharmCAS Twitter: www.twitter.com/PharmCAS

The Admissions Process:

- Approximate dates of interviews, offers: October – April
- Advisor portal: Liaison Universal Advisor Portal (UAP)
- Total number of applicants in most recent cycle: 16,176 in PharmCAS
- Average # of applications per student: 3.9
- Total number of first year students: 13,975 in Fall 2016
- **Profile of 2017 Entering Class**
 - GPAs
 - Science: 3.16
 - Non-Science: 3.55
 - Math: 3.24
 - Cumulative: 3.31
 - PCAT
 - Composite Percentile Mean: 59%
 - Sex
 - Female: 63%
 - Male: 37%
 - Race/Ethnicity
 - American Indian: 0.2%
 - Hispanic: 9.8%
 - Asian: 26.4%
 - Black or African American: 12.4%
 - Native Hawaiian: 0.1%

NAAHP Fact Sheet for Health Professions Advisors

Pharmacy

- White: 42.9%
- Multiple: 2.7%
- Did Not Report: 5.5%
- U.S. Citizens: 89.2%
- **Total Number of Students:**
 - 64,304 students enrolled in professional programs (PharmD)
 - 6,042 students pursuing graduate study (full and part-time)

Learn More about the Profession

Training & Career Opportunities:

- Number of years: 4 year doctoral program
- Degree attained: Doctor of Pharmacy (Pharm D)
- Total number of graduates in most recent academic year: 2015-2016
 - 14,566 first professional degrees in pharmacy were awarded:
 - 61.3 percent to females
 - 38.7percent to males
- Data on employment of recent graduates, if available:
 - Graduating student surveys available on the www.aacp.org website.
 - Most recent report: www.aacp.org/sites/default/files/2017-10/GSS_2016_Public%20School%20Summary%20Report_for%20web%2020160714.pdf

Key Resources for Students

- Pharmacy Careers: pharmacyforme.org/why-pharmacy-may-be-right-for-you/career-pathways/
- Pharmacy is Right for Me: www.pharmacyforme.org/

Key Resources for Advisors

- Pharmacy School Admissions Requirements:
 - www.aacp.org/resource/pharmacy-school-admission-requirements
- Tuition and application trends:
 - www.aacp.org/resource/pharmacy-school-admission-requirements

Social Media

- Pharmacy is Right for Me
 - Facebook: www.facebook.com/Pharm4Me
 - Twitter: twitter.com/Pharm4Me
 - Instagram : www.instagram.com/pharm4me/
- PharmCAS
 - Facebook: www.facebook.com/PharmCAS
 - Twitter: twitter.com/PharmCAS
- AACP
 - Facebook: www.facebook.com/AACPharmacy/
 - Twitter: twitter.com/aacpharmacy
 - YouTube: www.youtube.com/user/AACPVideo

Advisory Council Professional Association Partner Information

- **American Association of Colleges of Pharmacy (AACP):** www.aacp.org

NAAHP Fact Sheet for Health Professions Advisors

Pharmacy

- **Mission:** Founded in 1900, the American Association of Colleges of Pharmacy (AACP) is the national organization representing pharmacy education in the United States. The mission of AACP is to lead and partner with our members in advancing pharmacy education, research, scholarship, practice and service to improve societal health.
- **Size of Organization:** AACP has 38 staff members
- **Number of Member Institutions:** AACP is composed of all accredited colleges and schools with pharmacy degree programs accredited by the Accreditation Council for Pharmacy Education, including more than 6,600 faculty, 63,034 students enrolled in professional programs (PharmD) and 6,042 individuals pursuing graduate study.
- **New Institutional Members in Last Two Years:**
 - Binghamton University School of Pharmacy and Pharmaceutical Sciences
 - Marshall B. Ketchum University College of Pharmacy
 - Medical College of Wisconsin School of Pharmacy
 - University of Texas at El Paso School of Pharmacy

Advisory Council Contact Information

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Last updated: February 2018

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.

PHARMACY (PHARM.D.)

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Pharmacists are health professionals who are concerned with serving the pharmaceutical needs of patients and communities. The American Association of Colleges of Pharmacy reports the principal goal of pharmaceutical care is “to achieve positive outcomes from the use of medication which improves patients’ quality of life. These outcomes include: cure of a disease, elimination or reduction of symptoms, arresting or slowing a disease process, prevention of disease, diagnosis of disease, and desired alterations in physiological processes, all with minimum risk to patients.” As a result of society’s changing health and social issues. Pharmacists do much more than simply compound and dispense medication. Their roles have broadened to include direct patient care, education, and case management duties.

Pharmacists can be found in a variety of settings including community and consultant pharmacies, hospitals and institutions, managed care organizations, the pharmaceutical industry, academics and research, government agencies and many more. The most common setting is community pharmacies, which include independent, prescription only pharmacies, such as those found in medical office buildings, and chain pharmacies (local drug stores), which generate income from the sale of other merchandise. Opportunities are becoming increasingly available for pharmacists with advanced training to work as clinical pharmacists in recognized pharmacy practitioner specialties such as ambulatory care, clinical pharmacokinetics, geriatrics, oncology, psychopharmacology, drug information, and nutrition support. Advanced training for such programs usually requires a fellowship or residency after completion of the Pharm.D. degree. The median annual of wage-and-salary pharmacists in May 2016 was \$122,230. The top 10% earned more than \$145,910. Salaries vary by work setting and geographic location.

PHARMACY EDUCATION

There are 130+ accredited pharmacy programs offering the Doctor of Pharmacy (Pharm.D.) professional degree. The Pharm.D. is a four-year program that produces a scientifically and technically competent pharmacist that can use their knowledge to provide maximum health care services to patients. Pharmacy students gain experience in patient-centered learning experiences and from working in close, cooperative relationships with health practitioners. After completing a Pharm. D. degree, graduates seeking an advanced position have the option to pursue residency training in institutional and community pharmacy practice.

ACADEMIC PREPARATION

Requirements for admission to colleges of pharmacy vary. The vast majority of students who enter a pharmacy program have completed a minimum of three years of pre-pharmacy courses or a bachelor’s degree. Common coursework completed includes calculus, inorganic chemistry, organic chemistry, biology, physics, and additional courses in the humanities and social sciences. Many programs outside of California require applicants to take the Pharmacy College Admissions Test (PCAT). For the 2015-2016 testing cycle, tests will be offered on one or more dates in July, September, October, November, and January. No California Pharm.D. programs currently require the PCAT. Programs select applicants based on a variety of characteristics, including academic background, clinical experience, personal statement,

interview, letters of recommendation and personal qualities including motivation, communication, critical thinking skills, and empathy. PharmCAS states that applicants for the 2013 entering class earned an **average 3.25 undergraduate science GPA**, and a **3.38 overall cumulative GPA** (the non-science GPA average was 3.58 and the Math GPA average was a 3.33) (NAAHP AACP Updates 2015). Most schools expect applicants to gain first-hand paid or volunteer experience in a pharmacy setting to confirm their interest in the pharmacy profession. As pharmacists become more involved in educating patients, communication and interpersonal skills are increasingly important to demonstrate.

No particular major is required or preferred for pharmacy school admissions, thus students are advised to select a major they find interesting and in which they can excel. Students should also consider a major that may lead them to an alternate career, should they decide not to pursue the field of pharmacy. Whichever major a student declares, their course of study must incorporate the required pre-pharmacy requirements. Many students who select a science major find a great deal of overlap between their major requirements and those required for pharmacy school. Regardless of the choice in major, pharmacy schools prefer that students have a well-rounded liberal arts education.

COURSE REQUIREMENTS

CSULB courses which fulfill admission requirements for some U.S. programs:

Students maintain responsibility for verifying course selection with individual programs.

Coursework	CSULB Courses
One year of General Chemistry with Lab	Chemistry 111A & 111B
One year of Organic Chemistry with Lab	Chemistry 220A & 220B + 320L (Chem/Biochem. majors) OR 220A w/ 223A & 220B w/ 223B (Biol & other majors)
One year of Calculus	Math 122 & 123 OR Math 119A
One year of General Physics (Only 1 Lab)	Physics 100A & 100B OR 151 & 152
One year of General Biology with Lab	Biology 211 & 212 & 213
One year of English	English 100 OR Asam 100 OR Chls 104 OR Afrs 100 & Engl 101 OR 102 OR 300
One course of Public Speaking	Communication 130
One course of Macro OR Micro Economics	Economics 100 OR 101
One elective course	Psychology 100 OR Sociology 100 OR Anthropology 120

Students are also encouraged to take upper division courses in Biochemistry, Physiology, and Cellular and Molecular biology. Foreign Language such as Spanish is considered highly desirable.

ADDITIONAL RESOURCES

- [Pharmacy Careers](#)
- [Pharmacy is Right for Me](#)
- [Pharmacy School Admissions Requirements](#)
- [Pharmacy College Admission Test \(PCAT\)](#)
- [Pharmacy College Application Service \(PharmCAS\)](#)

For more information about Pharmacy, visit www.aacp.org and see your HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events.



www.aacp.org/pharmacycareers

Career Information Clearinghouse

This brochure was sponsored and prepared in conjunction with the Career Information Clearinghouse, a group of pharmacy organizations with a common interest of ensuring a strong future for the pharmacy profession. For additional information about a career in pharmacy, contact AACCP or any of the following CIC Members:

Academy of Managed Care Pharmacy
www.amcp.org

American Association of Pharmaceutical Scientists
www.aaps.org

American College of Apothecaries
www.americancollegeofapothecaries.com

American Pharmacists Association
www.pharmacist.com

American Society of Consultant Pharmacists
www.ascp.org

American Society of Health-System Pharmacists
www.ashp.org

National Association of Boards of Pharmacy
www.nabp.org

National Association of Chain Drug Stores
www.nacds.org

National Community Pharmacists Association
www.ncpanet.org

Pharmaceutical Research and Manufacturers of America
www.phrma.org



1727 King Street • Alexandria, VA 22314

p: 703-739-2330 • f: 703-836-8982 • www.aacp.org

Prescription FOR A REWARDING CAREER



Why pharmacy?

While it varies by pharmacy practice area, recent pharmacy graduates can earn top salaries right out of college! Pharmacy is a career that offers great benefits, flexible work schedules, outstanding growth opportunities, profit sharing and much more.

If you enjoy working with people, excel in science and would like a rewarding healthcare career, pharmacy is for you!

Outstanding opportunities.

There is a need for pharmacists in a wide variety of occupational settings.

Excellent earning potential.

Pharmacy is one of the most financially rewarding careers.

A well-rounded career.

Pharmacy is an exciting blend of science, healthcare, direct patient contact, computer technology and business.

A vital part of the healthcare system.

Pharmacists play an integral role in improving patients' health through the medicine and information they provide.

A trusted profession.

Pharmacists are consistently ranked as one of the most highly trusted professionals because of the care and service they provide.*

*According to data by Wirthlin Worldwide and Gallup International

There are many career options in pharmacy including:

- Academic pharmacy
- Community practice
- Government agencies
- Hospice and home care
- Hospital and institutional practice
- Long-term care or consulting pharmacy
- Managed care pharmacy
- Medical and scientific publishing
- Pharmaceutical industry
- Pharmaceutical sciences
- Trade or professional associations
- Uniformed (public health) services



The University of Louisiana at Monroe

Pharmacy Career Options

The Benefits of a Career in Pharmacy

Your Future in Pharmacy Begins with Education

A balanced and comprehensive high school and college education is an important first step in the pursuit of a professional degree in pharmacy, especially in the areas of math and science.

The Doctor of Pharmacy (Pharm.D.) degree program requires at least two years of pre-professional (undergraduate) study followed by four academic years of professional study. A growing number of first-year students enter a pharmacy program with three or four years of college experience.

The requirements for admission into a pharmacy program vary. Admission requirements for all U.S. pharmacy programs can be found at www.aacp.org/pharmacycareers.



Idaho State University

Pharmacists Help Patients Improve Their Health

Pharmacists' responsibilities include a range of care for patients, from dispensing medications to monitoring patient health and progress to maximize their response to the medication. Pharmacists also educate consumers and patients on the use of prescriptions and over-the-counter medications, and advise physicians, nurses and other healthcare professionals on medication decisions.

Pharmacists provide expertise about the composition of medications, including their chemical, biological and physical properties, as well as their manufacture and use. They ensure drug purity and strength and make sure that medications do not interact in a harmful way. Pharmacists are the medication experts ultimately concerned about their patients' health and wellness.



The University of Louisiana at Monroe

Take the first step toward an exciting career in pharmacy by visiting the American Association of Colleges of Pharmacy at www.aacp.org/pharmacycareers for links to all U.S. colleges and schools of pharmacy.

An Exciting Curriculum

The professional pharmacy curriculum is designed to educate pharmacists to:

- Counsel patients on the proper use of their medications;
- Promote the public health;
- Develop and manage medication distribution and control systems;
- Manage pharmacy practice; and
- Plan and perform ongoing evaluations to provide patients with the best drug therapy for their individual healthcare needs.



The University of New Mexico

PHARMACY - A Prescription for a Rewarding Career

Why Pharmacy?

- **A well-rounded career.** Pharmacy is an exciting blend of science, health care, direct patient contact, computer technology, and business.
- **A vital part of the health care system.** Pharmacists play a vital role in improving patient care through the medicine and information they provide.
- **Excellent earning potential.** Pharmacy is one of the most financially rewarding careers.
- **Outstanding opportunities.** There is an unprecedented demand for pharmacists in a wide variety of occupational settings.
- **A trusted profession.** Pharmacists are consistently ranked as one of the most highly trusted professionals because of the care and service they provide. **According to data by Gallup International*

Pharmacy Career Options

- Academic pharmacy
- Community pharmacy
- Government agencies
- Hospice and home care
- Hospital and institutional practice
- Long-term care or consulting pharmacy
- Managed care pharmacy
- Medical and scientific publishing
- The pharmaceutical industry
- Trade or professional associations
- Uniformed (public health) service

Pharmacists Help Patients Get Well

While responsibilities vary among the different areas of pharmacy practice, the bottom line is that pharmacists help patients get well. Pharmacist responsibilities include a range of care for patients, from dispensing medications to monitoring patient health and progress to maximize their response to the medication. Pharmacists also educate consumers and patients on the use of prescriptions and over-the-counter medications, and advise physicians, nurses, and other health care professionals on drug decisions. Pharmacists also provide expertise about the composition of drugs, including their chemical, biological, and physical properties and their manufacture and use. Pharmacists ensure drug purity and strength and make sure that drugs do not interact in a harmful way. They are the drug experts ultimately concerned about their patients' health and wellness.

Shortage of Pharmacists

The Department of Health and Human Services (HHS) released a report in 2000 titled "The Study of the Supply and Demand for Pharmacists" to determine to what extent a shortage of pharmacists exists. The report concludes that there is an increasing demand for pharmacists' service that is outpacing the current and future pharmacist supply. The report also states that factors causing the shortage are not likely to abate in the near future.

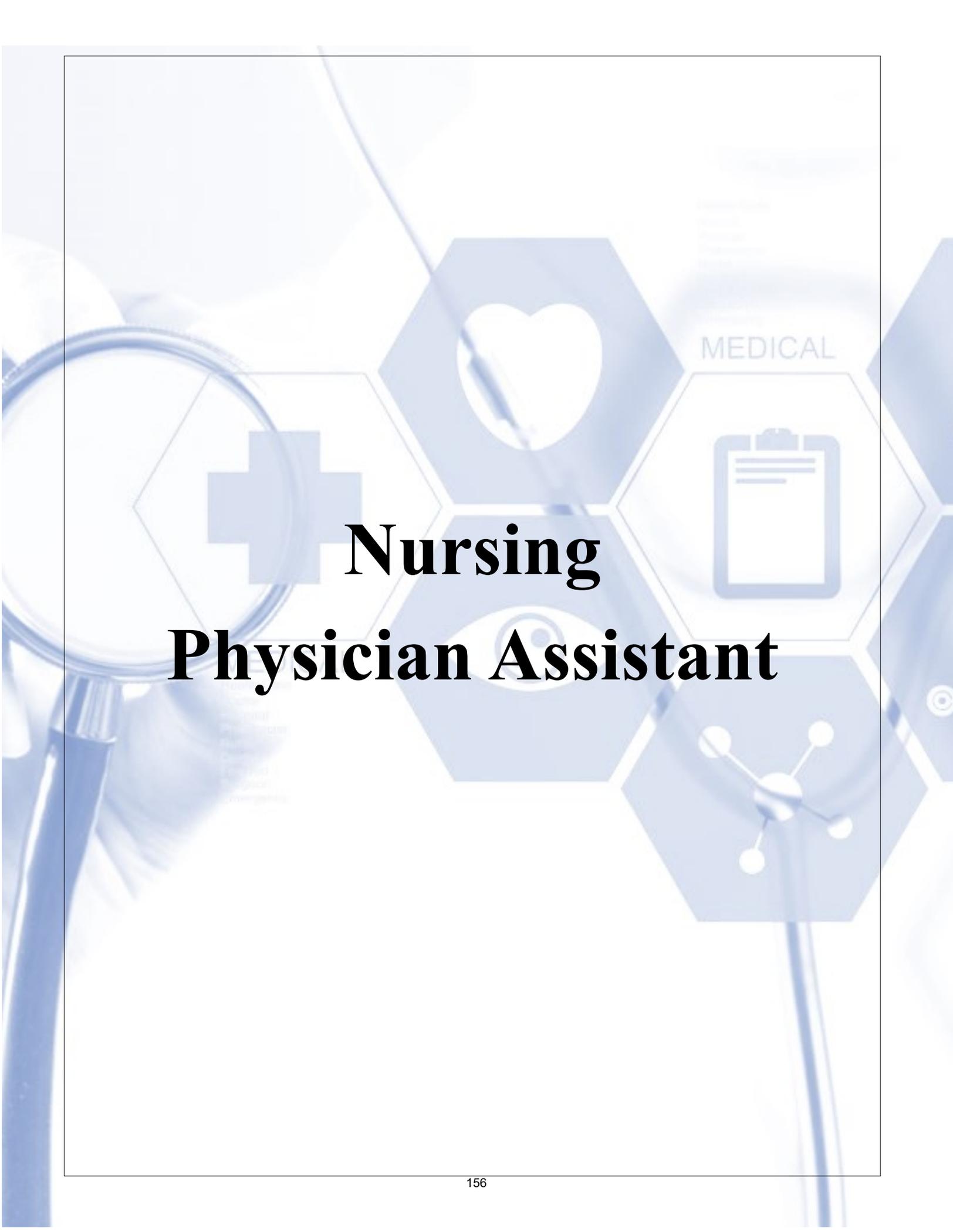
Your Future in Pharmacy Begins with Education

A balanced and comprehensive high school and college education is an important first step in the pursuit of a professional degree in pharmacy, especially in the areas of math and science. The Doctor of Pharmacy (Pharm.D.) degree program requires at least two years of pre-professional (undergraduate) study followed by four academic years of professional study. The majority of first-year students enter a pharmacy program with three or four years of college experience. The requirements for admission into a pharmacy program vary.

Don't delay...find out more today!

Visit the American Association of Colleges of Pharmacy web site for more information about career opportunities and links to all U.S. colleges and schools of pharmacy. <http://www.aacp.org>





Nursing
Physician Assistant

General Description:

Though often working collaboratively, nurses do not simply assist physicians and other health care providers. Instead, they practice independently within their own defined scope of practice. Nursing roles range from direct patient care to case management, establishing nursing practice standards, developing quality assurance procedures, and directing complex nursing care systems.

What are some common daily activities/experiences?

- Assessing, managing, and orchestrating care
- Communicating with other healthcare team members to plan care
- Educating patients and families about disease trajectory, treatments, and side effects of medications
- Documenting care

What are 3-5 personal characteristics important for happiness and success in your profession?

- Ability to work under pressure
- Fulfillment from working with the team to prevent suffering
- Contribute to research
- Ability to set boundaries
- Commitment to lifelong learning

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- Am I willing to listen and be present with people when they are most vulnerable?
- Am I willing to advocate for patients and their families when they do not have a voice?
- Am I willing to communicate and work with a team to orchestrate the best care possible?
- Am I willing to commit to lifelong learning and engage in evidence-based practice?

Preparing for Admission:

Check out the publicly accessible program directory on nursingcas.org to view admissions requirements for participating programs. Please note that on NursingCAS every single program posted has a “Program Homepage” in the “Program Materials” section (account required to access this section). On that homepage schools are encouraged to list program prerequisites, minimum GPA, academic background, standardized tests, required references, experience, etc. and have the option of inputting their requirements for custom questions, document uploads, pre-requisite coursework, and references.

- **Resources for researching schools:**
 - NursingCAS: www.nursingcas.org/find-a-program/
 - AACN: www.aacnnursing.org/Membership/Member-Program-Directory
 - Discover Nursing: www.discovernursing.com/schools#no-filters

The Admissions Cycle:

- CAS(es): Nursing Centralized Application Service (NursingCAS)
 - www.nursingcas.org

- Application opens: August
- Application can be submitted: deadlines vary per program
- Number of schools participating: 235
- Fees, fee waivers:
 - Undergraduate Level: \$50 for the 1st program, \$35 each additional program
 - Graduate Level: \$70 for the 1st program, \$40 for each additional program
 - NursingCAS offers a fee waiver program, see www.nursingcas.org/prepare-to-apply/fees/ for more details
- Letters of rec logistics: Up to 6 references per program may be submitted through the Evaluator Portal. References must be attached to a specific designation in order for the schools to access it.
- Standardized test logistics: You can self-report to NursingCAS. And official GRE (see school [codes](#)) and TOEFL scores (code #B506) are sent directly to NursingCAS. For TEAS, HESI, and other tests, request that official scores, if required, be sent directly to programs.
- Transcripts: If required, official transcripts should be mailed by schools directly to NursingCAS. Some programs allow applicants to upload unofficial transcripts or do not require any type of transcript to be submitted via NursingCAS. Visit the “Academic History” section of NursingCAS to determine your program’s specific transcript needs, also listed on the [directory](#). This is also the case with transcript entry, programs decide if they will require applicants to input all of their college level coursework, pre-requisites only, or no coursework. The transcript entry requirements are also posted in the “Academic History” section and the [directory](#). Electronic transcripts sent via Parchment or Credential Solutions are also acceptable by NursingCAS, see more [details](#).
- Contact information: (617)-612-2880 / nursingcasinfo@nursingcas.org
- AACN NursingCAS contact for advisors: Caroline Kane, ckane@aacnnursing.org / (202) 463-6930 x258

The Admissions Process:

- Approx. dates of interviews, offers: varies by school and program
- Advisor Portal: uap.webadmit.org
- Total number of applicants in most recent cycle (through CAS and/or all member programs if known): 106,191 applications via NursingCAS and 588,344 applications overall for 874 nursing schools surveyed as reported in AACN’s Enrollment & Graduations annual [data report](#)
- Total number of first year students (through CAS and all if known): N/A due to all the different program pathways
- Total number of students: 497,743 undergraduate and graduate nursing students
- Total number of graduates in most recent academic year: 174,827
- Average # of applications per student: data not available
- Test score and GPA averages and ranges, other data on applicants and accepted students (major, age, race/ethnicity, gender, whatever makes sense for the profession): data not available, varies greatly per school and program

Learn More about the Profession

Training & Career Opportunities:

- Number of years: varies by career path

NAAHP Fact Sheet for Health Professions Advisors

Nursing

- Degree attained: Most common are BSN, MSN, DNP, and PhD, for a full listing of nursing degree types and descriptions visit www.nursingcas.org/prepare-to-apply/glossary-of-nursing-degrees/ and www.aacnnursing.org/Students/Nursing-Education-Pathways
- [Employment advice guide](#) for nurses seeking employment.
- Data on employment of recent graduates, if available:
 - For new baccalaureate prepared nurses - 56% were employed at graduation, 87% were employed 4-6 months after graduation

Key Resources for Students:

- [Resource Center](#) for Students on AACN's Website
- [Financial Aid](#) & Scholarships for Nursing Students
- [Career Advice](#) for Prospective Nursing Students
- [Accelerated Nursing Programs](#) for Students with a Degree in Another Discipline
- [National Student Nursing Association](#)
- [Graduate Nursing Student Academy](#)

Key Resources for Advisors:

- Nursing Career [Facts](#)
- Pathway [Chart](#) to a Doctoral Degree in Nursing

Social Media:

Advisory Council Professional Association Partner Information

- **American Association of Colleges of Nursing**, www.aacnnursing.org
- **Mission:** The American Association of Colleges of Nursing (AACN), as the collective voice for academic nursing, AACN serves as the catalyst for excellence and innovation in nursing education, research, and practice.
- **Size of organization, Number of member institutions:** 810 member schools of nursing employing more than 18,000 full-time faculty members
- **New institutional members in last two years:** For a full list of member institutions, visit www.aacnnursing.org/Membership/Member-Program-Directory.

Advisory Council Contact Information

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NAAHP liaison and contact information

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Date updated: 12/2017

For more information on many health professions, we recommend the NAAHP publication, *Health Professions Admission Guide: Strategies for Success*, available on the NAAHP website.

NURSING (RN, NP)

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Nurses promote health, prevent disease, and help patients cope with illness. They can practice independently, although they also collaborate with all members of the healthcare team to provide the care needed for each patient. Nurses also serve as advocates for patients, families, and communities. They develop and manage nursing care plans; instruct patients and their families in proper care; and help individuals and groups take steps to improve or maintain their health. Nursing is the nation's largest health care profession with more than 3.1 million registered nurses practicing nationwide. The U.S. Bureau of Labor Statistics projects that employment for registered nurses will grow faster than most other occupations through 2018.

NURSING SCHOOL

The nursing field has a wide range of career pathways, from entry-level practitioner to doctoral-level researcher. The primary pathway to nursing is the four-year Bachelor of Science in Nursing (BSN). Registered nurses (RN) are prepared either through a four-year baccalaureate program. There are additional ways of obtaining a BSN or Master of Science in Nursing (MSN) besides the traditional 4-year route which include: 1) Accelerated Bachelor of Science in Nursing (A-BSN) programs, which are geared for those without previous nursing preparation, but who hold a baccalaureate/bachelor's degree in a major field other than nursing. An Accelerated second degree BSN program is a full time commitment, which generally takes 12-18 months to complete (depending on the program); and 2) Entry-level Nursing Masters programs, also accelerated in nature, are geared to non-nursing graduates, generally take three years to finish.

RESIDENCY AND FELLOWSHIP TRAINING

Nurses who graduate with an MSN are called advanced practice nurses (APNs). These nurses deliver health care services that were previously delivered by physicians, and they typically focus on one of four advanced practice areas: Nurse Practitioner (NP); Certified Nurse Anesthetist (CRNA); Clinical Nurse Specialist (CNS); or Certified Nurse Midwife (CNM). Both A-BSN and MSN programs qualify students to sit for the National Council Licensure Examination (NCLEX-RN exam), which one must pass to obtain a nursing license.

ACADEMIC PREPARATION

In order to be considered for admission to the nursing major, CSULB students must be declared as pre-nursing students. Pre-nursing students must complete a series of prerequisite courses: written communication, oral communication, critical thinking, STAT 108, BIOL 207, BIOL 208, CHEM 140, and BIOL 311. Each course must be completed with a grade of "C" or better; when all prerequisites are completed the GPA for the prerequisite courses must be "B" or better (3.0 or better). Applicants to the nursing major are normally admitted by the time they reach junior standing and must apply before they have earned 75 Timely Graduation units. Students who have earned 75 or more Timely Graduation units at CSULB are not eligible to apply to nursing. Pre-nursing students should note that withdrawing or repeating courses to improve their grades or GPA will result in poor academic progress and will likely make them ineligible for admission.

COURSE REQUIREMENTS

CSULB courses which fulfill admission requirements for some nursing programs:

Students maintain responsibility for verifying course selection with individual programs.

Coursework	CSULB Courses	Units
One year of General Chemistry with lab	Chemistry 111A & 111B	5, 5
Human Anatomy and Physiology with Lab	Biology 208: Human Anatomy Biology 207: Human Physiology	4, 4
One year of General Biology with Lab	Biology 211 & 212 & 213	4, 4
One year of General Physics with Lab	Physics 100A & 100B OR 151 & 152	4, 4
Microbiology	Biology 311	5
One semester to 1 year of Calculus	Math 119A OR 122 & 123	3 – 4
One course in Statistics	Biology 260 OR Statistics 108	3
One year of Behavioral Science courses	Sociology 100 and Psychology 100	3, 3
One year of English (Composition and Literature preferred)	English 100 AND another course from the English department such as: 102, 180, 300 (some schools MAY take equivalent courses)	3, 3

Courses in the social sciences, humanities, languages, and computer skills are also recommended.

IMPORTANT FACTORS CONSIDERED FOR SUCCESSFUL APPLICANTS

Clinical exposure strongly recommended for admission to most medical schools. This can include a paid or volunteer position in a doctor's office, local clinic, or a hospital. Most hospitals and clinics gladly accept volunteers. Nursing admission committees want to know that you have the desire and ability to work with patients and successful participation in clinical volunteer or job experience can demonstrate this. Working and/or shadowing a nurse is strongly encouraged.

Work experience can also be valuable in demonstrating your potential to succeed in school. Success in a work environment can reveal meaningful information to admissions committees. Depending on the setting, work experience can develop and showcase a variety of skills including communication (oral and/or written), time management, and problem solving.

Letters of recommendation are required for application to some nursing programs. The purpose of the letters is to provide nursing schools with an impression of the applicant from faculty or persons who are in a position to observe the applicant's work, as it relates to the study of medicine. Students are encouraged to create and maintain positive contacts with prospective recommenders early in their academic career.

ADDITIONAL RESOURCES

- [American Association of Colleges of Nursing \(AACN\)](#)
- [Nurse Source](#)
- [All Nursing Schools](#)
- [List of Accelerated BSN programs](#)
- [Discover Nursing](#)
- [Centralized Application Service for Nursing Programs \(NursingCAS\)](#)
- [Graduate Record Examination \(GRE\)](#)

For more information on nursing, visit www.discovernursing.com and see the HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events.

PATHWAY TO A DOCTORAL DEGREE IN NURSING



1 You are not a nurse and are enrolled in a nursing program and expect licensure within 18 months and the awarding of a degree in nursing.

- Achieve the best GPA possible.
- Consider Specialty/Area.
- Get involved with a nurse faculty member.
- Work on a special project or independent study.
- Obtain letters of references.
- NCLEX review and evaluation
- GRE preparation
- Seek advisement for:
 - a. Masters with clinical focus
 - b. Masters without APRN focus
 - c. Masters to PhD or Master to DNP program



2 You are presently a nurse but do not have a bachelor's degree (associate degree or enrolled in an accelerated MS program that does not award the bachelors).

- Achieve the best GPA possible.
- Get involved with a nurse faculty member.
- Work on a special project or independent study.
- Obtain letters of references.
- In general, you must be an RN and hold at least one degree in nursing to apply to doctoral programs.

3 You are presently a nurse with a bachelor's degree in a health-related field (not nursing)

- Apply to a MS program in nursing.
- Apply to a combined MS to PhD or DNP program.
- Make sure ALL prerequisites are complete.

5 You are presently a nurse with a master's degree in a health-related field (not nursing).

- Apply to a PhD or DNP program accepting applications with non-nursing degrees.
- Clarify degree admission requirements.
- If you plan a career in academia, there may be limitations on your faculty role if the master's degree is not in nursing.

4 You are presently a nurse with a bachelor's degree in nursing.

- Apply to a MS or a combined MS to PhD or MS to DNP program.
- Consider GRE review.

6 You are presently a nurse with a master's degree in nursing.

- Apply to a post-masters PhD or DNP program.
- Seek advice regarding GPA and GRE admissions.

General Description:

PAs are medical providers who are licensed to diagnose and treat illness and disease, and to prescribe medication for patients, working in a variety of settings. Forbes and U.S. News & World Report consistently ranks PA as one of the top health care careers, with a median annual salary of \$98,000 and projected growth rate of 30% through 2024¹.

What are some common daily activities/experiences?

PAs are focused on patient care and may undertake educational, research, and administrative work. Studies show that in a primary care setting, PAs can provide nearly all of the clinical services a physician does, including taking medical histories, performing physical exams, ordering and interpreting laboratory tests, diagnosing and treating illnesses, counseling patients, setting fractures, and assisting in surgery.

What are 3-5 personal characteristics important for happiness and success in your profession?

- Intelligence, sound judgment, and intellectual honesty
- Excellent interpersonal skills
- Respect for yourself and others
- Ability to respond to emergencies in a calm and reasoned manner
- Commitment to patient's welfare

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- What are the key differences between PAs and other like health care providers, such as nurses, nurse practitioners, physicians, DOs?
- How will joining the PA profession help you achieve your career goals?
- What qualities and attributes do you possess that will make you an excellent health care provider, specifically, a PA?

Preparing for Admission:

Each PA program sets its own prerequisite coursework requirements. It is best to review a program's website for all prerequisites requirements and substitutions, including academic coursework, patient care experience, testing, and more. A more general review of information can be conducted using the PAEA [program directory](#).

- **Academic:** academic prerequisites in science and non-science courses can include, but are not limited to:
 - Anatomy
 - Biology
 - Physiology
 - Chemistry
 - Organic chemistry
 - Biochemistry
 - Physics
 - Genetics
 - English, composition, technical writing
 - Psychology
 - Sociology, Humanities
 - College-level algebra or math
 - Statistics
- **Standardized tests:** there is no universally required standardized test for PA admissions. Some programs may require any of the GRE, MCAT, TOEFL, or other science-based testing
- **Experience:** some programs may require shadowing, volunteer, paid, or any combination of direct patient care experience. Some programs will make recommendations on experience without requirements.

¹ www.bls.gov/ooh/healthcare/physician-assistants.htm

NAAHP Fact Sheet for Health Professions Advisors

Physician Assistant

- Hour requirements vary but can range from 0-4,000 hours
- **Evaluations:** while most PA programs require three evaluations, others may require less or more. Some programs, but not all, require evaluations from specific types of references, which can include:
 - PAs
 - Physicians (MD or DO)
 - Nurse practitioners (NP)
 - Professors with knowledge of applicant's academic abilities
 - Supervisors in a health area or other job setting
 - Academic advisors

Resources for researching schools:

- PA Program Directory: directory.paeaonline.org
- PA Focus: pafocus.org

The Admissions Cycle:

- **CAS**
 - Central Application Service for Physician Assistants (CASPA):
caspa.liasoncas.com/applicant-ux/#/login
 - **Application Opens:** April 26, 2018
 - **Application Can Be Submitted:** From open date until the March 1, 2019 close date.
 - **Deadlines**
 - There are nine deadline options in a CASPA cycle and they include June 15, July 15, August 1, September 1, October 1, November 1, December 1, January 15, and March 1.
 - **Participating Programs**
 - 221 of 229 PAEA member programs and 13 potential developing PA programs.
 - **Fees:** \$179 for first submission, \$52 for each additional
 - **Fee Waivers:** CASPA [Fee Assistance Program](#)
 - **Evaluation Letter Logistics**
 - Up to five evaluations are to be submitted electronically via CASPA.
 - Two evaluations are required for an applicant to become complete.
 - PA program letter requirements vary. Applicants must confirm individual program requirements prior to listing any references on CASPA, as they cannot be removed or replaced.
 - PA programs do not prefer committee letters.
 - **Standardized Test Logistics**
 - Official GRE scores can be submitted using individual program CASPA GRE codes (if applicable). *See the ETS website for a list of program codes.*
 - If a PA program does not have a CASPA GRE code, applicants must follow the instructions on the PA program website for submitting GRE scores.
 - TOEFL scores must be submitted directly to CASPA by request to ETS. Paper score copies are not accepted by CASPA.
 - **Transcripts**
 - All official transcripts must be sent directly by the institution(s) to CASPA at the PO Box provided in the CASPA instructions & FAQ.

NAAHP Fact Sheet for Health Professions Advisors

Physician Assistant

- CASPA now accepts electronic transcripts from Credential Solutions and Parchment. See the [Applicant Help Center](#) for more information on sending electronic transcripts to CASPA.
- **Instruction manual and FAQ**
 - CASPA [Applicant Help Center](#)
- **Background checks**
 - PAEA partners with CastleBranch (CertifiedBackground) to provide background checks to programs choosing to participate through CASPA.
 - Programs must opt in and will submit background check orders on the applicants they require them from. Not all applicants through CASPA will be required to obtain a background check.
 - In most cases, applicants will be responsible for the background check fees.
- **Contact Information**
 - Customer Service: (617) 612-2080 or caspainfo@caspaonline.org
- **CAS Contact for Advisors** (if different)
 - CASPA@PAEAonline.org or the customer service information provided above.
- **CASPA Facebook**
 - www.facebook.com/CASPAOnlineApp/?fref=ts

The Admissions Process:

- **Advisor Portal**
 - uap.webadmit.org/session/new
- **Approx. Dates of Interviews/Offers**
 - Information varies significantly by program.
- **Total Number of Applicants in Most Recent Cycle** (through CAS and/or all member programs if known)
 - 26,953 (this is total of submitted applicants through CASPA in the 2016-2017 application cycle). *2017-2018 cycle data will be available in March 2018.*
- **Average # of Applications Per Student:**
 - Seven applications per application.
- **Total Number of First Year Students** (through CAS and all if known)
 - For the 2016 start class (2015-2016 application cycle), there were approximately 8,500 matriculants. *CASPA is in the process of collecting 2017 start class matriculant data, which will be available in March 2018.*
- **Test score and GPA Averages and Ranges, Other Data on Applicants and Accepted Students** (major, age, race/ethnicity, gender, whatever makes sense for the profession)
 - **Applicant Reports** (2015-2017 cycles):
 - Past applicant comparison reports from 2011 through 2017 are available at the Dropbox link below:
www.dropbox.com/work/CASPA%20Announcements/Applicant%20Data%20Reports?preview=2015-2017+Applicant+Data+Comparison.pptx
 - The updated 2016-2018 cycle report will be available in March 2018.
 - **Matriculant Reports** (2012-2015 start classes):

NAAHP Fact Sheet for Health Professions Advisors

Physician Assistant

- The 2013-2016 matriculant comparison report is available at the Dropbox link below: www.dropbox.com/s/7qhzznmz58ja9b5/1%202013-2016%20Matriculant%20Comparison%20Report.pptx?dl=0
- The 2014-2017 cycle report will be available in March 2018.
- **Total Number of Students**
 - Approximately 8,500 in the 2016 start class (*CASPA programs only*).

Learn More about the Profession

Training & Career Opportunities:

- **Number of Years**
 - PA school averages 24-27 months.
- **Degree Attained**
 - Master's degree (specific credentials vary by program)
- **Total Number of Graduates in Most Recent Academic Year**
 - Not available but there were approx. 8,500 matriculants in the 2016 start class (*CASPA programs only*).
- **Data on Employment of Recent Graduates, if available**
 - Check www.aapa.org or www.nccpa.net.

Key Resources for Students

- PA Focus: pafocus.org
- CASPA Applicant Portal: caspa.liaisoncas.com/applicant-ux/#/login
- CASPA Instructions & FAQ: help.liaisonedu.com/CASPA_Applicant_Help_Center

Key Resources for Advisors

- The American Academy of Physician Assistants: www.aapa.org/become-a-pa
- The National Commission of Certification of Physician Assistant: www.nccpa.net
- The Accreditation Review Commission for Physician Assistants, www.arc-pa.org

Social Media

- PA Focus Facebook: www.facebook.com/PAFocus/?fref=ts
- PA Focus Twitter: twitter.com/pa_focus

Advisory Council Professional Association Partner Information

Physician Assistant Education Association, www.paeaonline.org

- **Mission:** Our mission is health care for all. PAEA serves as a resource for individuals and organizations from various professional sectors interested in the educational aspects of the PA profession. The Association is the organization primarily responsible for collecting, publishing, and disseminating information on the PA programs. PAEA provides effective representation to affiliated organizations involved in health education, health care policy, and the national certification of PA graduates. PAEA works to ensure quality PA education through the development and distribution of educational services and products specifically geared toward meeting the emerging needs of PA programs, the PA profession, and the health care industry.
- **Size of organization, Number of member institutions**
 - 40+ employees
 - 229 voting member programs
- **New Institutional Members in Last Two Years**
 - 24 total institutional members, over 10 in the last two years.

Advisory Council Contact Information

Ramona Joyner
Administrative Association, Member & Community
Engagement
CASPA@PAEAonline.org

NAAHP liaison and contact information

Martha Edde, Med
East Tennessee State University
eddem@mail.etsu.edu

Date updated: December 11, 2017

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.

PHYSICIAN ASSISTANT (PA-C)

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Physician Assistants (PA) provide a wide range of health care services and work as a team under the supervision of physicians and surgeons. Many PAs work in primary care areas such as general internal medicine, pediatrics, and family medicine. Others work in specialty areas, such as general and thoracic surgery, emergency medicine, orthopedics, and geriatrics. PAs take medical histories, perform physical exams, order and interpret laboratory tests, diagnose and treat illnesses, counsel patients, assist in surgery, and set fractures. The responsibilities of a PA depend on the practice setting, education, and experience of the PA, and on the state laws and regulations. Settings typically include private practice, clinics, hospitals, the armed forces, and other federal government agencies. Physician Assistants are required to have leadership skills, self-confidence, and emotional stability. They must be willing to continue studying throughout their career to keep up with medical advances.

According to the American Academy of Physician Assistants, the number of practicing PA's has doubled in the last decade, and should reach about 120,000 jobs by 2022. State laws regulating physician assistants have expanded access to physician services provided by PAs, including the authority to prescribe medications in all 50 states and the District of Columbia, and Guam. The development of HMOs, other prepaid plans and the growing acceptance of PAs by other health care professionals have combined to strengthen the job market. The median income for physician assistants is \$90,930.

PHYSICIAN ASSISTANT EDUCATION

There are 226 accredited physician assistant programs in the United States, and they are located at medical schools, medical centers, hospitals, and in the uniformed forces. The vast majority award Masters degrees, and most applicants to PA programs have a bachelor's degree and 3-years of health care experience at the time of entry.

PAs are educated as generalists in medicine; all programs emphasize primary care. PA programs require students to complete approximately 26 months of classroom studies, and the educational program is modeled after the medical school curriculum with a combination of classroom and clinical instruction. PA education includes classroom instruction in biochemistry, nutrition, human anatomy, physiology, microbiology, clinical pharmacology, clinical medicine, geriatric and home health care, disease prevention, and medical ethics. Students obtain supervised clinical training in several areas, including primary care medicine, inpatient medicine, surgery, obstetrics and gynecology, geriatrics, emergency medicine, psychiatry, and pediatrics. PAs must complete 100 hours of continuing medical education every 2-years and take recertification exams every 10-years.

ACADEMIC PREPARATION

Prerequisite admission requirements vary from school to school. Selection criteria may also vary according to the individual institution's philosophy, thus refer to the individual program website for detailed information. For the 2016 matriculated class, the median age of applicants was 26. The average science GPA was 3.48, average non-science GPA was 3.61, and the cumulative GPA was 3.53. (PAEA –NAAHP).

Any major is appropriate for PA preparation. Students are advised to select a major they find interesting and to work at developing a broad-based, interdisciplinary foundation of knowledge and skills from which they can build upon.

COURSE REQUIREMENTS

Many Schools require a certain amount of hours of direct patient care (check with the school that you are considering), some examples of preferred clinical experiences are: Military medic or corpsman, Certified Nurses' Aide, EMT (patient care hours only), Paramedic, Physical Therapy Aide, Respiratory Therapist, or Occupational Therapist Aide. GRE or MCAT is required for some but not all.

CSULB courses which fulfill admission requirements for some U.S. programs:

Students maintain responsibility for verifying course selection with individual programs. This is NOT a comprehensive list of prerequisites for all programs.

Coursework	CSULB Courses
One year of General Chemistry with lab	Chemistry 111A & 111B
One year of General Biology with lab	Biology 211, 212, (213 also recommended)
One course of Human Anatomy with lab	Biology 208
One course of Physiology with lab	Biology 207 OR 342 w/ 342L
One course of Microbiology with lab	Biology 311
One course in Statistics	Biology 260 OR Statistics 108 OR HDEV 250
One course of Psychology	Psychology 100
One year of Beginning Spanish Language	Spanish 101B & 201A

ADDITIONAL RESOURCES

- [PA Focus](#)
- [PA Program Directory](#)
- [Central Application Service for Physician Assistants \(CASPA\)](#)

For more information about Physician Assistant Programs, visit www.paeaonline.org and see your HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events.

Physician Assistant Education



Since the first three PAs graduated from Duke University in 1967, the profession has grown dramatically. In 2009, there are 145 accredited PA programs in the United States, which together graduate more than 5,000 new PAs each year. Federal support has been critical to the development of the profession at several key points.

The continuing growth of the profession looks strong, with more than 20 new programs in the pipeline and a robust applicant pool that has grown by more than 10% each year. Challenges faced by PA programs include recruitment of qualified faculty, shortages of preceptors and clinical sites, and increasing the diversity of faculty and applicants.

PA EDUCATION AT A GLANCE

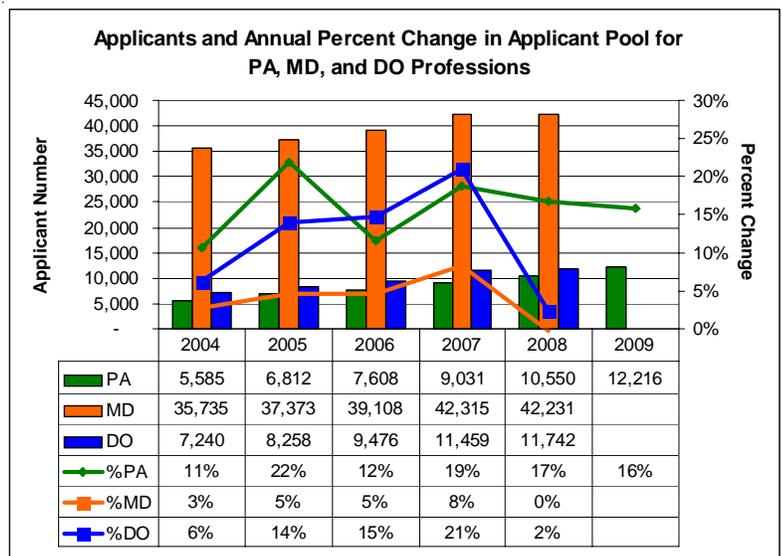
- PAs are educated as generalists in medicine; their flexibility allows them to practice in more than 60 medical and surgical specialties.
- The average PA program is 27 months long: one year of classroom study and 15 months of clinical rotations.
- Curriculum includes 400 hours of basic sciences and nearly 600 hours of clinical medicine
- More than 80% of programs award a master's degree.
- More than 80% of programs are housed at a university or college; 14% in academic health centers.

PA GRADUATES

- PAs are licensed health professionals who practice medicine as members of a team with their supervising physicians.
- PAs exercise autonomy in medical decision making and provide a broad range of medical and therapeutic services to diverse populations in rural and urban settings.
- More than one third of graduates practice in primary care.
- PAs practice in all 50 states and the District of Columbia, and in virtually all health care settings, including hospitals, physicians' offices, HMOs, nursing homes, public health agencies, and community clinics.

THE PA APPLICANT POOL

- Eighty percent of applicants have a baccalaureate degree, most commonly in biology
- Applicants average 3.7 years of health care experience
- Average overall undergraduate GPA is 3.25; average science GPA is 3.13
- Nearly one third of applicants are non-white (31%)
- Mean age of applicants is 26.9 years old
- Three quarters (74%) of applicants are female



The majority of applicants to PA programs apply through the Central Application Service for Physician Assistants (CASPA). Over the past five years, CASPA's applicant pool has grown by an average of more than 15% (see chart). The profession's rapid growth is expected to continue, driven by the projected shortage of physicians and other health care professionals, the growing demand for health care services from an aging population, and the continuing strong applicant pool. The Bureau of Labor Statistics projects a 27% increase in the number of PA jobs over the 10-year period, 2006-2016.

With its relatively short initial training time and the flexibility of generalist-trained PAs, the PA profession is well positioned to help fill projected shortages in the numbers of health care professionals.

PA FACTS

What Is a PA?

A physician assistant is a graduate of an accredited PA educational program who is nationally certified and authorized by the state to practice medicine with the supervision of a licensed physician. PAs are invaluable members of the healthcare team and work in concert with physicians to ensure the highest quality of care for patients.

To Become a Physician Assistant

ATTEND AN ACCREDITED PA PROGRAM...

- The typical entering student has a bachelor's degree and approximately four years of healthcare experience.
- The average program takes 27 months to complete.

...WITH CLASS/LAB INSTRUCTION

PA students take more than 400 hours in basic sciences (with more than 75 hours in pharmacology) plus approximately 175 hours in behavioral sciences and nearly 580 hours of clinical medicine. Subjects include:

- | | |
|--------------------------------|--------------------------|
| ■ Anatomy | ■ Physical diagnosis |
| ■ Pathology | ■ Differential diagnosis |
| ■ Pharmacology | ■ Pathophysiology |
| ■ Biochemistry | ■ Medical ethics |
| ■ Clinical laboratory sciences | ■ Behavioral sciences |
| ■ Microbiology | ■ Physiology |

...AND CLINICAL ROTATIONS

PAs participate in more than 2,000 hours of clinical rotations, with an emphasis on primary care in ambulatory clinics, physicians' offices and acute/long-term care facilities. Rotations include:

- | | |
|-------------------|-------------------------|
| ■ Family medicine | ■ Emergency medicine |
| ■ General surgery | ■ Obstetrics/gynecology |
| ■ Pediatrics | ■ Internal medicine |
| ■ Psychiatry | |

To Practice as a Physician Assistant

INDIVIDUALS MUST

- Pass a national PA certification exam administered by the National Commission on Certification of Physician Assistants (for graduates of accredited PA programs only).
- Obtain a state license

To Maintain Certification

PA's MUST

- Complete 100 hours of continuing medical education over a two-year cycle.
- Pass a recertification exam every six years.



Where Do PAs Practice?

More than 90,000 certified physician assistants work in virtually every medical and surgical setting across the country. More than one-third (39.4 percent) practice in hospital settings and close to 40 percent work in a group practice or solo physician office. The remaining PAs work in a variety of settings, including community health centers, freestanding surgical facilities, nursing homes, school- or college-based facilities, industrial settings and correctional institutions.

What Can a PA Legally Do?

Physicians may delegate to PAs medical duties that are within the physician's scope of practice, the PA's training and experience and that are allowed by law.

These duties include performing physical examinations, diagnosing and treating illnesses, ordering and interpreting lab tests, assisting in surgery, providing patient education and counseling, and making rounds in nursing homes and hospitals. All states, the District of Columbia, the Commonwealth of the Northern Mariana Islands, and Guam and the U.S. Virgin Islands authorize physicians to delegate prescriptive privileges to the PAs they supervise.

Why Was the Profession Created?

Recognizing that some residents of North Carolina had limited access to quality medical care, the chair of the Department of Medicine at the Duke University Medical Center established a program in 1965 to educate ex-military corpsmen to practice medicine with physician supervision. The educational model for PAs was based in part on his experience with the fast-track training of doctors during World War II. These first students had received extensive healthcare training during their military careers.

What About Reimbursement for Services Provided by PAs?

PAs offer great value to their employers by providing high quality medical and surgical care to patients for which most public and private third party payers reimburse. Services provided by PAs are billed under the PA's name or under the name of the supervising physician, depending on the policies of the individual payer. Most federal and state healthcare reform initiatives recognize and include PAs as vital members of the healthcare team.

And the Quality of PA Care?

Numerous studies have found that the quality of care that PAs provide is comparable to that of physicians. The congressional Office of Technology Assessment studied healthcare services provided by PAs and determined that "physician assistants provide health care that is indistinguishable in quality from care provided by physicians." Additionally, according to a study published in *The American Surgeon* in 2004, PAs "are a valuable adjunct in improving quality of patient care." And PAs provide quality of care comparable to physicians according to a 2009 Rand Report that confirmed the conclusions of two reviews of published studies. A nationwide study published in 2005 also found that, regardless of provider, Medicare patients are generally satisfied with the quality of health care they receive.



PA WORK SETTINGS

Source: AAPA 2010 Annual PA Census

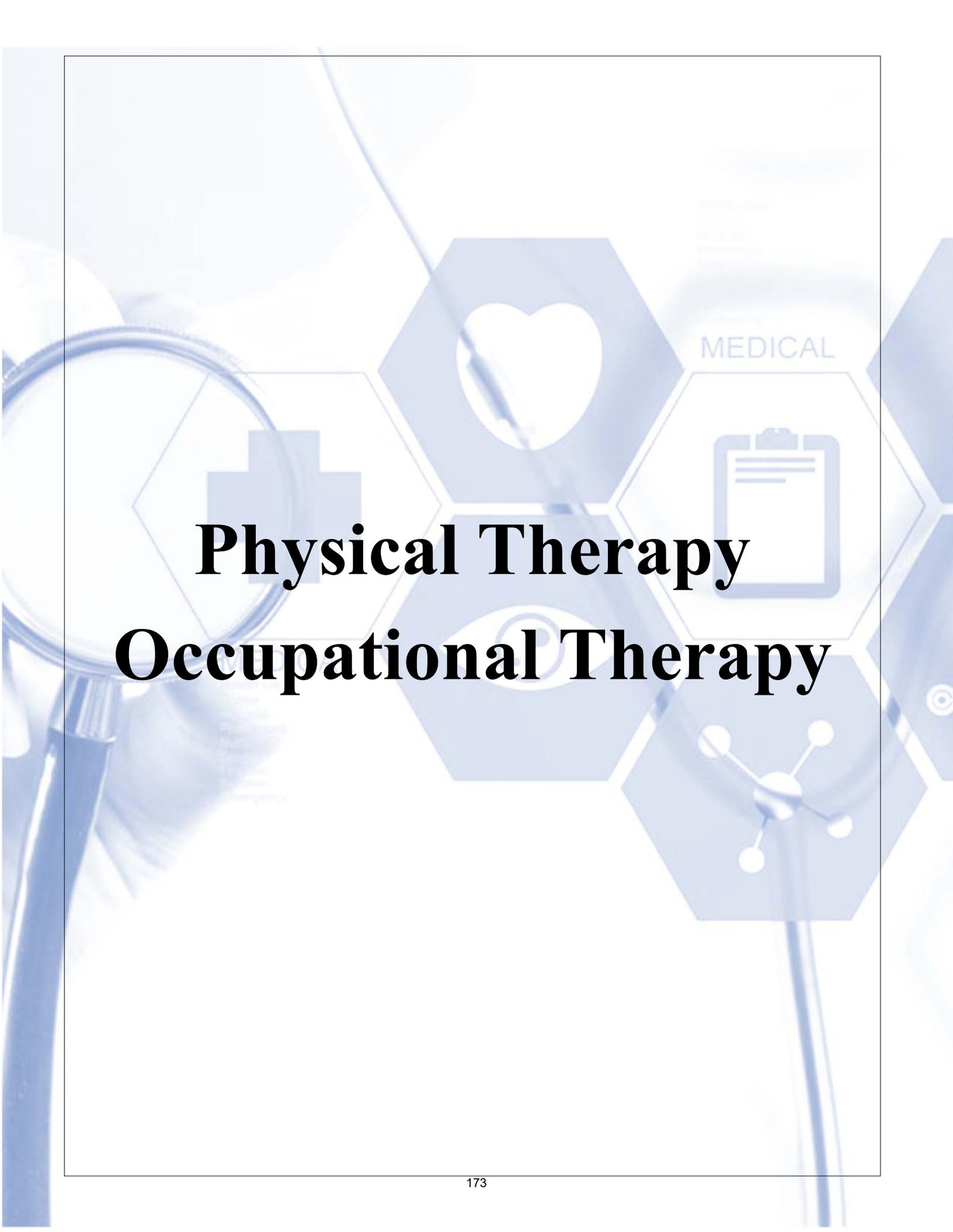
Specialty Physician Groups	29.2%
Solo Physician Practices	11%
Other	10.1%
Certified Rural Health Clinics	2.7%
Federally Qualified and Community Health Centers	5.2%

PAs WORK IN VIRTUALLY EVERY AREA OF MEDICINE AND SURGERY

Source: AAPA 2010 Annual PA Census

General Surgery & Surgical Subspecialties	25.9%
Family Medicine	24.3%
Other	15.7%
General Internal Medicine & IM Subspecialties	15.1%
Emergency Medicine	10.9%
General Pediatrics & Pediatric Subspecialties	3.7%
Ob/Gyn	2.0%
Occupational Medicine	1.9%





Physical Therapy Occupational Therapy

General Description

Physical therapists are evidence-based, healthcare professionals who diagnose and treat individuals of all ages who have medical problems or other health-related conditions that limit their abilities to move and perform functional activities in their daily lives. They offer cost-effective treatment that improves mobility and relieves pain, reduces the need for surgery and prescription drugs, and allows patients to participate in a recovery plan designed for their specific needs. In addition, physical therapist work with individuals to prevent the loss of mobility before it occurs by developing fitness and wellness-oriented programs for healthier and more active lifestyles. Physical therapists provide care for people in a variety of settings, including hospitals, private practices, outpatient clinics, home health agencies, schools, sports and fitness facilities, work settings, and nursing homes. State licensure is required in each state in which a physical therapist practices.

What are some common daily activities/experiences?

As essential participants in the health care delivery system, physical therapists assume leadership roles in rehabilitation, prevention, health maintenance, and programs that promote health, wellness, and fitness. Physical therapists also play important roles both in developing standards for physical therapy practice and in developing health care policy to ensure availability, accessibility, and optimal delivery of health care services.

As clinicians, physical therapists engage in an examination process that includes:

- Taking the patient's medical history,
- Reviewing the medications, test results, and notes from other healthcare providers,
- Conducting a systems review, and
- Performing tests and measures to identify potential and existing problems.

To establish diagnoses, prognoses, and plans of care, physical therapists perform evaluations, synthesizing the examination data and determining whether the problems to be addressed are within the physical therapy scope of practice. Physical therapists typically do the following:

- Diagnose patients' functions and movements by observing them stand, walk or perform activities/tasks, perform various tests and measures, and by listening to their concerns.
- Design individualized plans of care based on their medical expertise, best available research, the patients' unique situations and goals, and the expected outcomes of the plans.
- Use techniques such as exercises, hands-on therapy, and equipment to ease patients' pain, help them increase their mobility, prevent further pain or injury, and facilitate health and wellness.
- Evaluate a patients' progress, modify their plans of care, when necessary, to try new treatments.
- Educate patients and their families about what to expect and how best to cope with a recovery process.
- Develop and implement discharge plans.

A few of the health conditions commonly treated by physical therapists are as follows:

- Arthritis
- Back & Neck Pain
- Brain Injury
- Cancer-Related Complications
- Carpal Tunnel Syndrome
- Cerebral Palsy
- Chronic Pain
- Cystic Fibrosis
- Diabetes
- Fall Risk & Balance Issues
- Fibromyalgia
- Fractures & Multiple Trauma
- Incontinence
- Joint Injuries, including to Knee & Ankle
- Lymphedema
- Multiple Sclerosis
- Muscle Strains
- Obesity
- Osteoporosis
- Parkinson's Disease
- Pelvic Pain
- Plantar Fasciitis
- Post-Operative Rehabilitation
- Rotator Cuff Injuries
- Spinal Cord Injuries & Birth Defects
- Sports Injuries
- Wound & Burn Care

NAAHP Fact Sheet for Health Professions Advisors

Physical Therapy

The practice of physical therapists varies by type of patient. For example, a patient experiencing loss of mobility due to stroke needs different care from that given to an athlete recovering from an injury. Some physical therapists specialize in one type of care, such as orthopedics or geriatrics. Many physical therapists also help to prevent loss of mobility by developing fitness and wellness programs to encourage healthier and more active lifestyles.

Physical therapists practice as part of a healthcare team, overseeing the work of physical therapist assistants and aides; and consulting with physicians, surgeons and other specialists. In addition, some physical therapists are educators, researchers, consultants, or healthcare administrators. They may practice in government agencies, healthcare industries, schools, and other public/private institutions.

What are 3-5 personal characteristics important for happiness and success in your profession?

- **Compassion.** Physical therapists are often drawn to the profession in part by a desire to help people. They often work with people who are in pain or have been through traumatic events and they must have empathy for their patients.
- **Detail-oriented.** Like other healthcare providers, physical therapists should have strong analytical and observational skills to diagnose a patient's problem, evaluate treatments, and provide safe, effective care.
- **Dexterity.** Physical therapists must use their hands to provide manual therapy and therapeutic exercises. They should feel comfortable touching and physically assisting patients.
- **Interpersonal skills.** Physical therapists spend a significant amount of time interacting with patients and other healthcare providers, and enjoy working with people from various and diverse backgrounds. They must be able to clearly explain treatment programs, motivate and listen to patients' concerns, and communicate with the healthcare team to provide effective therapy.
- **Physical stamina.** Physical therapists spend much of their time on their feet, moving as they work with patients. They should enjoy physical activity.
- **Resourcefulness.** Physical therapists customize treatment plans for patients. They must be flexible and able to adapt plans of care to meet the needs of each patient.

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- Are you interested in how the human body works and moves?
- Do you want to interact directly with patients and their families or caregivers?
- Are you interested in a hands-on career?
- Are you an effective communicator with good interpersonal skills?
- Can you motivate people?

Preparing for Admission:

- **Academics:** Physical therapist education programs in the United States only offer the Doctor of Physical Therapy (DPT) degree to all new students who enroll. Most DPT education programs require applicants to earn a bachelor's degree prior to admission into the professional phase of the program. Other programs offer a 3+3 curricular format in which 3 years of specific pre-professional (undergraduate/pre-PT) courses must be taken before the student can advance into a 3-year professional DPT program. A few programs recruit all or a portion of students directly from high school into a guaranteed freshman admissions program. High school students accepted into these programs can automatically advance into the professional phase of the program pending the completion of specific undergraduate courses and any other stated contingencies (eg, minimum GPA). (View the [Physical Therapist \(PT\) Admissions Process](#) for more detailed information)

NAAHP Fact Sheet for Health Professions Advisors

Physical Therapy

DPT programs may require preprofessional (pre-PT/undergraduate) science courses to be completed in a 4-year university/college within the 5-10 years prior to enrollment. Students should be prepared to identify the classes completed or planned that will fulfill the program's course requirements. Some programs only accept anatomy or physiology courses completed in a biology, neuroscience, anatomy, or integrated physiology department. Programs may not accept a combined anatomy and physiology (A&P) course or those completed in other departments, such as kinesiology. Visit the PTCAS directory to determine what type of anatomy and physiology courses are required for admission. See also the [Course Prerequisite Summary](#).

There is no preferred major to be eligible for admission to a DPT program. The most common undergraduate majors among accepted applicants include exercise science, biology, kinesiology, health sciences, and psychology. In selecting a college major, students should consider how they will satisfactorily complete the prerequisite courses for the designated physical therapist programs in addition to the college/university's degree and major requirements. For additional information about college majors for the most recent applicant pool, review the [PTCAS Applicant Data Report](#) and the [PTCAS Course Prerequisite Summary](#):

- **Standardized Tests:** Most programs require the Graduate Record Examination (GRE) for admission and have established a PTCAS GRE Code for the reporting of scores. www.ptcas.org/Tests/
- **Experience/Exposure:** Many programs require applicants to have a certain number of volunteer or paid experiences working with patients under the supervision of a licensed physical therapist. The program may specify the settings and types of experiences required. Applicants may also be required to have a licensed physical therapist verify the hours. This experience may be an important factor in the admissions process. Students should respectfully contact physical therapy clinics, hospitals, long-term care facilities (eg, nursing homes), and other healthcare settings in the area to find observation opportunities. APTA cannot assist in these efforts. See also the [Physical Therapist Observation Hours](#).
- **Letters of Reference:** Many programs require 1-4 letters of letters of reference as part of the admissions process. Programs may require references from a particular individual, such as a physical therapist, science professor, or academic advisor. If references are required, select individuals who meet the program's requirements; know the student well; and can speak to maturity, dependability, dedication, compassion, communication skills, leadership, and any hands-on experience in the field. See also Reference [Requirements by Program Summary](#) and the [reference instructions](#).
- **Resources for researching schools:** PTCAS Directory, www.ptcas.org/DirectoryProgramsList/

The Admissions Cycle:

- CAS(es): Physical Therapist Centralized Application Service (PTCAS) www.ptcas.org
 - **Application opens:** July 2017 (2017-18 cycle) and July 2018 (2018-19 cycle)
 - **Application can be submitted:** July 2017-May 2018 (2017-18 cycle) and July 2018 – May 2019 (2018-19 cycle)
 - **Number of schools participating:** 224 in the 2017-18 cycle
 - **Fees:** \$145 to apply to one program, \$45 for each additional
 - **Fee waivers:** A limited number of PTCAS application fee waivers are available. Waivers are granted to financially disadvantaged applicants on a first-come, first-serve basis. PTCAS will decide if applicants qualify for a fee waiver based on their income, or their parent's income, if claimed as a dependent, as reported on the most recent federal income tax return. No

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Physical Therapy

other documentation is accepted. Applicants who receive a fee waiver may apply to one DPT program in PTCAS for free. If they choose to apply to more than one program, they will pay a fee of \$45 for each additional designation.

- **Letters of reference logistics:** Applicants can request up to four letters of reference via PTCAS. PTCAS will automatically e-mail the evaluator once the reference request is saved on the application. Evaluators should watch for an e-mail from noreply@ptcas.org with the subject heading "PTCAS Reference Request". PTCAS will only accept electronic references in the 2017-2018 cycle and will not accept paper or uploaded references. Reference requirements vary by program. Visit the PTCAS directory for details. www.ptcas.org/ProgramPrereqs/
- **Standardized test logistics:** There is no GRE code for PTCAS. Instead, applicants must arrange for the Educational Testing Service (ETS) to send official GRE scores to the correct GRE code for each designated program. Most programs have a PTCAS GRE code that differs from the main university code. www.ptcas.org/Tests/
- **Transcripts:** Official US transcripts should be sent to PTCAS with a transcript matching form.
- **Instruction manual and FAQ:** www.ptcas.org/ApplicationInstructions/Document/
- **Contact information:** 617-612-2040, ptcasinfo@ptcas.org
- **CAS contact for advisors:** Ryan Bannister, Director of Centralized Application Services and Student Recruitment, APTA, RyanBannister@apta.org.
- **PTCAS on Facebook:** www.facebook.com/PTCAS
- **PTCAS on Twitter:** twitter.com/PTCAS
- **Advisor portal:**
 - portal.ptcas.org/advisors17/index.cgi (2016-2017 cycle)
 - uap.webadmit.org (2017-2018 cycle - Universal Advisor Portal)
- **Approximate dates of interviews, offers:** Varies by DPT program.

The Admissions Process:

- **Total number of applicants in most recent cycle:** 19,025 in PTCAS
- **Average # of applications per student:** 6.2 in PTCAS
- **Total number of first year students (through CAS and all if known):** ~10000
- **Test score and GPA averages and ranges, other data on applicants):** Please review the 2016-17 [PTCAS Applicant Data Report](#).
- **Total number of students:** 31,380

Learn More about the Profession

Training & Career Opportunities

- **Number of years:** 3 years of graduate education.
- **Degree attained:** Doctor of Physical Therapy (DPT) degree
- **Total number of graduates in most recent academic year:** ~9,403

Key Resources for Prospective Students

- [APTA Information for Prospective Students:](#)
- [Move Forward: Physical Therapy Brings Motion to Life](#)
- [Why I Chose a Career in Physical Therapy”](#) (video)

NAAHP Fact Sheet for Health Professions Advisors

Physical Therapy

Key Resources for Health Professions Advisors

- Cultural Competence in Physical Therapy: www.apta.org/CulturalCompetence/

Social Media

- APTA on Facebook:
 - <http://www.facebook.com/APTAfans>
 - <https://www.facebook.com/MoveForwardPT>
- APTA on Twitter
 - <https://twitter.com/aptatweets>
 - <https://twitter.com/MoveForwardPT>

Advisory Council Professional Association Partner Information

- **American Physical Therapy Association (APTA), www.apta.org**
- **Mission:** The mission of the American Physical Therapy Association (APTA), the principal membership organization representing and promoting the profession of physical therapy, is to further the profession's role in the prevention, diagnosis, and treatment of movement dysfunctions and the enhancement of the physical health and functional abilities of members of the public.
- **Vision Statement:** Transforming society by optimizing movement to improve the human experience.
- **Size of organization:** The American Physical Therapy Association (APTA) is an individual membership professional organization representing more than 100,000 member physical therapists (PTs), physical therapist assistants (PTAs), and students of physical therapy. There are currently more than 180 staff members at APTA.
- **Number of member institutions:** There are currently 267 DPT education programs accredited or with candidate status granted by the Commission on Accreditation in Physical Therapy Education (CAPTE).
- **New institutional members in last two years:** See also the [CAPTE Directory](#).
 - Adventist U of Health Sciences
 - Alvernia U
 - Baylor U Graduate School
 - Brenau U
 - Briar Cliff U
 - Campbell U
 - Concordia U-Saint Paul
 - DeSales U
 - Emory & Henry College
 - Gannon University
 - High Point U
 - Indiana State U
 - Kean U
 - Marist College
 - Mary Baldwin College
 - Methodist U
 - Plymouth State U
 - Samford U
 - South College
 - Trine U
 - U of Arkansas for Medical Sciences
 - U of Jamestown
 - U of Mary Hardin-Baylor
 - U of Mount Union
 - West Coast U
 - Western Kentucky U
 - William Carey U
 - Wingate U

Advisory Council Contact Information

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Date updated: 1/10/2018

For more information on many health professions, we recommend the NAAHP publication, [Health Professions Admission Guide: Strategies for Success](#), available on the NAAHP website.

PHYSICAL THERAPY (D.P.T.) ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Physical therapists are evidence-based healthcare professionals who diagnose and treat individuals of all ages who have medical problems or other health-related conditions that limit their abilities to move and perform functional activities in their daily lives. They offer cost-effective treatment that improves mobility and relieves pain, reduces the need for surgery and prescription drugs, and allows patients to participate in a recovery plan designed for their specific needs. In addition, physical therapist work with individuals to prevent the loss of mobility before it occurs by developing fitness and wellness-oriented programs for healthier and more active lifestyles. Physical therapists provide care for people in a variety of settings, including hospitals, private practices, outpatient clinics, home health agencies, schools, sports and fitness facilities, work settings, and nursing homes. State licensure is required in each state in which a physical therapist practices. The 2016 median pay for physical therapist was \$85,400. Employment of physical therapists is projected to grow 34 percent from 2014 to 2024, much faster than the average for all occupations. Demand for physical therapy services will come from the aging baby boomers, who are staying active later in life. In addition, physical therapists will be needed to treat people with mobility issues stemming from chronic conditions, such as diabetes or obesity (Occupational Outlook, 2016).

18,475 applicants applied via the Physical Therapist Centralized Application Service (PTCAS) during the 2015-2016 admissions cycle. Of the individual applicants who applied via PTCAS with verified application status, 9,227 applicants received one or more offers of acceptance from a participating program. The average GPA of applicants was **3.40** while the average GPA of accepted students was **3.59**.

PHYSICAL THERAPY SCHOOL

Physical therapist education programs in the United States only offer the Doctor of Physical Therapy (DPT) degree to all new students who enroll. The length of professional DPT programs is typically 3 years. Primary content areas in the curriculum may include, but are not limited to, biology/anatomy, cellular histology, physiology, exercise physiology, biomechanics, kinesiology, neuroscience, pharmacology, pathology, behavioral sciences, communication, ethics/values, management sciences, finance, sociology, clinical reasoning, evidence-based practice, cardiovascular and pulmonary, endocrine and metabolic, and musculoskeletal. Eighty percent (80%) of the DPT curriculum comprises classroom (didactic) and lab study and the remaining 20 percent (20%) is dedicated to clinical education. PT students spend on average 27.5 weeks in their final clinical experience. Licensed physical therapists may choose to pursue a residency or fellowship program to enhance their knowledge and practice. Physical therapists have the opportunity to become board-certified clinical specialists but it is not required.

ACADEMIC PREPARATION

Due to the competitive nature of the Physical therapy school application process and rigorous training required, students should *carefully consider their motivation and preparation for this career*. Physical therapy schools are looking for an academic record that indicates the aptitude and knowledge base needed to successfully complete the Physical therapy school curriculum.

There is no preferred major to be eligible for admission to a DPT program. The most common undergraduate majors among accepted applicants include exercise science, biology, kinesiology, and psychology. In selecting a college major, students should consider how they will satisfactorily complete the prerequisite courses for the designated physical therapist programs in addition to the college/university's degree and major requirements.

COURSE REQUIREMENTS

DPT programs require prerequisite science courses to be completed at a university/college within the 5-10 years prior to enrollment. Students should be prepared to identify the classes completed or planned that will fulfill the program's course requirements. Some programs only accept anatomy or physiology courses completed in a biology, neuroscience, anatomy, or integrated physiology department. Programs may not accept a combined anatomy and physiology (A&P) course or those completed in other departments, such as kinesiology.

CSULB courses which fulfill admission requirements for most U.S. Physical Therapy programs:

Coursework	CSULB Courses	Units
One year of General Chemistry with Lab	Chemistry 111A & 111B	5, 5
Human Anatomy and Physiology with Lab	Biology 208: Human Anatomy Biology 207: Human Physiology	4, 4
One year of General Biology with Lab	Biology 211 & 212	4, 4
One year of General Physics with Lab	Physics 100A & 100B OR 151 & 152	4, 4
One course in Statistics	Biology 260 OR Kinesiology 483	3
General Psychology	Psychology 100	3, 3

IMPORTANT FACTORS CONSIDERED FOR SUCCESSFUL APPLICANTS

Many programs require applicants to have volunteer or paid experiences working with patients under the supervision of a licensed physical therapist. The program may specify the settings and types of experiences required. Applicants may also be required to have a licensed physical therapist verify the hours. This experience may be an important factor in the admissions process. Students should respectfully contact physical therapy clinics, hospitals, long-term care facilities (e.g., nursing homes), and other healthcare settings in the area to find observation opportunities. See also the [Physical Therapist Observation Hours](#).

Many programs require 1-4 letters of recommendation as part of the admissions process. Programs may require references from a particular individual, such as a physical therapist, science professor, or academic advisor. If references are required, select individuals who meet the program's requirements, know the student well, and can speak to maturity, dependability, dedication, compassion, communication skills, leadership, and any hands on experience in the field. See also [Reference Requirements](#) by Program.

Most programs require the [Graduate Record Examination \(GRE\)](#) for admission and have established a PTCAS GRE Code for the reporting of scores.

[Physical Therapist Centralized Application Service \(PTCAS\)](#). Application opens early July. Application can be submitted: July -May. The cost is \$145 to apply to one program and \$45 for each additional program. There is also a fee waivers that is available to a limited amount of eligible students. Waivers are granted to financially disadvantaged applicants on a first-come, first-serve basis. PTCAS will decide if applicants qualify for a fee waiver based on their income, or their parent's income.

ADDITIONAL RESOURCES

- [APTA Information for Prospective Students](#)
- [Move Forward: Physical Therapy Brings Motion to Life](#)
- [Why I Chose a Career in Physical Therapy](#)

For more information on Physical Therapy, visit www.apta.org and see your HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events.



California State University, Long Beach Department of Physical Therapy

Guidelines for Admission and Prerequisites Doctor of Physical Therapy (DPT)

Physical Therapy at CSULB is a full-time, competency based program designed to prepare each graduate to function as a physical therapist. Students who complete the degree and internship requirements are qualified to write the licensing examination provided by the Board of Medical Quality Assurance. Prior criminal convictions may limit licensure in California.

Application to the Program:

The student must apply to the University through CalState.edu/apply from October 1st to January 15th and to the Physical Therapy Department through PTCAS.org from July 1st to November 1st simultaneously, using two separate online applications. Official transcripts and GRE scores are sent directly to CSULB's Enrollment Services and to PTCAS.

The Department admits 32-36 students per year to the Physical Therapy program. Admission to the University as a graduate student in physical therapy is on a competitive basis using the Selection Criteria described on page 2 of this brochure.

Requirements for Admission:

In addition to meeting the University's academic standards for admission, an applicant to the Physical Therapy Program must:

1. Hold, or be eligible to hold, an acceptable Bachelor's Degree in any field,
2. Have attained an overall grade point average of at least 3.0 (A = 4.0).
3. Have been in good academic, professional, and clinical standing at the last institution and if applicable in the last entry-level physical therapist educational program attended,
4. Successfully have completed all prerequisite courses listed on page 2 of this brochure with a minimum of "C" and a minimum grade point average of 3.0 by the end of the fall semester prior to the year of admission to the program. Only 2 courses may be in progress during the fall semester of application.
5. Taken the Graduate Record Examination (GRE) taken within the last 5 years.
6. Have knowledge of physical therapy through related paid/volunteer experience under the direct supervision of a licensed physical therapist. It is recommended to have experience in different areas of physical therapy e.g.

a. rehabilitation	b. geriatric
c. pediatric	d. acute/general hospital

A hospital setting is strongly suggested. A minimum of 100 hours is required and up to 400 hours is recommended.

7. Complete and file an application to the program through PTCAS.org which must include:
 - a. official transcripts of all academic work attempted,
 - b. minimum of three (3) letters of recommendation, attesting to your potential for success as a physical therapist and/or your scholarly potential. One letter from each of the following:
 - physical therapist with whom you have had a professional association,

- professor for a prerequisite course which you completed,
 - if previously employed, an employer,
 - If not previously employed, a physical therapist with whom you have had a professional association.
 - c. written statement of purpose reflecting your commitment to physical therapy,
 - d. documentation of related work experience,
 - e. official scores of the Graduate Record Examination taken within the last 5 years.
8. Submit the following to the department after acceptance into the program.
- a. signed Essential Functions document attesting that you can perform the essential functions required of physical therapy education and clinical practice.
<http://www.csulb.edu/colleges/chhs/departments/physical-therapy/requirements-for-admission/>
 - b. official transcripts for all undergraduate, and graduate (if applicable) work done for all courses. Any courses in progress during fall semester of application must be sent to PTCAS and to CSULB Enrollment Services as soon as the course/semester/quarter is completed.

CSULB Prerequisite Courses for the DPT program:

We require the equivalent of one year (2 semester, or 3 quarter courses) of Human Anatomy and Physiology, General Biology, General Chemistry, General Physics; and one course in Statistics and one course in General Psychology.

All Human Anatomy and Physiology, General Biology, General Chemistry and General Physics courses must have a lab section. Human Anatomy and Human Physiology must be taken within five (5) years at the time of application; all other courses must be taken within 10 years at the time of application.

CSULB COURSE	DESCRIPTION
Biology 208	Human Anatomy
Biology 211 & 212	General Biology I & II
Biology 207	Human Physiology
Biology 260	Biostatistics
Chemistry 111 A & B	General Chemistry
Physics 100 A & B	General Physics
Psychology 100	General Psychology

Biology, Chemistry, and Physics sequences **must** be for biology, science, allied health, etc., majors.

Microbiology may substitute for Biology 212/Biology II.

Organic Chemistry, Biochemistry or a combined Organic/Biochemistry course can substitute for General Chemistry II.

Biostatistics requirement can be met by taking a statistics course from either the mathematics, psychology or biology department from your university.

Selection Criteria:

The admission committee will primarily consider:

- All college/university academic work completed including:
 - Overall grade point average (GPA)
 - The GPA in prerequisite courses
- Scores from the Graduate Record Examination (GRE)
- Number of experience hours and sites
- Letters of recommendation
- Personal essay

Rev. 6/1/2017



General Description:

Occupational Therapy is a health profession concerned with promoting health and well-being through occupation. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. Occupational therapists achieve this outcome by working with people and communities to enhance their ability to engage in the occupations they want to, need to, or are expected to do, or by modifying the occupation or the environment to better support their occupational engagement.

What are some common daily activities/experiences?

Your life is made up of occupations—meaningful everyday activities. These occupations can include many roles, such as being a parent, a friend, a spouse, a tennis player, an artist, a cook, or a musician. We generally don't think about our daily occupations until we have trouble doing them. Everyone has an occupation—from the toddler whose occupations are playing and learning to develop important skills, to the older adult whose occupations are engaging with family and friends and managing his or her home. If you are recovering from an accident, injury, or disease, your valued occupations may be disrupted. Occupational therapy incorporates your valued occupations into the rehabilitation process, which improves your participation in these occupations, and assists you in returning to them.

What are 3-5 personal characteristics important for happiness and success in your profession?

A person interested in occupational therapy must be able to effectively communicate with others, actively adapt and think critically, as well as be an efficient and productive member of an interdisciplinary team serving patients at all levels of care. Successful practitioners are able to integrate philosophical and theoretical knowledge, values, beliefs and ethics in order to improve participation and quality of life for those individuals and populations with and without impairments and limitations. They typically demonstrate a strong knowledge of a person's psychological, physical, emotional, and social makeup, and can evaluate how a condition (or risk for a condition) is affecting the body and mind using a holistic perspective.

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

When selecting an occupational therapy graduate program, students should carefully consider the program(s) that best match their personal and professional goals and choose programs that will help them achieve these goals, whether as a practitioner, manager, scientist, or teacher. For example, students who have a strong academic record in science and are interested in pursuing careers that include research, scholarship and leadership, are best matched to the OTD programs in research universities. Students who have demonstrated a strong interest in community service and have professional goals focused on direct service delivery may be best suited to a master's program. Each has an important role to play as the profession strives to address the growing need for occupational therapy.

Preparing for Admission:

- Individual OT programs will determine whether an applicant is eligible for admission and will notify applicants directly regarding all admission decisions. OT programs may not take all OTCAS application fields into consideration in the admission decision process. Admission policies and

NAAHP Fact Sheet for Health Professions Advisors
Occupational Therapy

prerequisites vary significantly by program and program delivery model; e.g., a 2.5 year master's graduate program will differ from the requirements for admission to a 3+2 master's format.

- Resources for researching schools: [AOA: OT Program Formats & Admissions](#)

The Admissions Cycle:

- CAS(s):
 - [OTCAS: https://otcas.liasoncas.com/applicant-ux/#/login](https://otcas.liasoncas.com/applicant-ux/#/login)
 - [OTACAS: https://otacas.liasoncas.com/applicant-ux/#/login](https://otacas.liasoncas.com/applicant-ux/#/login)
 - Application opens: July 2016
 - Application can be submitted: July 2016 – June 2017
 - Number of schools participating:
 - Fees, fee waivers:
 - OTCAS: \$140 for the first program, \$60 for each additional program
 - OTACAS: \$50.00 for each additional program
 - Letters of recommendation logistics: References should come directly from the evaluator to OTCAS/OTACAS, unless otherwise instructed by your designated program. Evaluators can only submit references electronically.
 - Standardized test logistics: If required by program, GRE and TOEFL test scores must be entered on the application. Any other scores should be sent directly to the program.
 - Transcripts: Send official transcripts directly to OTCAS/OTACAS.
 - Instruction manual and FAQ:
 - [OTCAS FAQ](#)
 - [OTACAS FAQ](#)
 - Contact information: 617-612-2860 / otcasinfo@otcas.org
- OTCAS on [Facebook](#)
- OTCAS on [Twitter](#)

The Admissions Process:

- Approx dates of interviews, offers: 2-6 months prior to the first semester
- [Advisor portal](#)
- Total number of applicants in most recent cycle (through CAS): approx. 9,900
- Total number of first year students (through CAS and non-participating programs) 7,193 OT (2015), 6,562 OTA (2015). Data from OT Annual Data Report, 2015-16.
- Test score and GPA averages and ranges, other data on applicants and accepted students (major, age, race/ethnicity, gender, whatever makes sense for the profession):
- Total number of students: 10,048 undergraduate and 18,550 graduate students
- Total number of graduates in 2015:
 - 136 doctoral graduates (43% 5 year growth)
 - 5,875 master's graduates (34% 5 year growth)
 - 4,914 OTA graduates (70% 5 year growth)

Training & Career Opportunities:

- Number of years: OT: Masters (5-6 years); OTD (6-7 years); OTA: Associates (2-3 years)
- Degree attained: OT: MOT/ MS; OTD; OTA: AAS
- Data on employment of recent graduates, if available: 75-100% employed within 6 mths

For more information on many health professions, we recommend the NAAHP publication, [Health Professions Admission Guide: Strategies for Success](#), available on the NAAHP website.

NAAHP Fact Sheet for Health Professions Advisors
Occupational Therapy

Key Resources for Students:

- [OT Careers](#)

Key Resources for Advisors:

- [OT Education Programs](#)
- OT Annual Data Report, 2014-15
 - <http://www.aota.org/-/media/corporate/files/educationcareers/educators/2014-2015-annual-data-report.pdf>

Social Media:

- [AOTA on Facebook](#)
- [AOTA on Twitter](#)

Advisory Council Professional Association Partner Information

The **American Occupational Therapy Association (AOTA)** advances the quality, availability, use, and support of occupational therapy through standard-setting, advocacy, education, and research on behalf of its members and the public.

Size of organization, number of member institutions

AOTA is the nationally recognized professional association promoting and protecting the professional interests of more than 213,000 occupational therapy practitioners and students nationwide.

- As of September 2016, there were 511 entry-level educational programs:
 - 14 accredited doctoral entry-level occupational therapy (OT) programs
 - 155 accredited master's entry-level occupational therapy (OT) programs
 - 220 accredited associate occupational therapy assistant (OTA) programs
 - 122 candidate, developing, or applicant programs (26 doctorate, 42 master's, and 54 associate)

New institutional members

There has been an increase in the number of developing and applicant programs due to the increased demand for occupational therapy services. Since 2007 the number of graduate OT programs has increased by 60% (89 new programs) and the undergraduate OTA programs have grown by 98% (136 new programs).

Advisory Council Contact Information

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Date updated: 10/14/2016_

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.

OCCUPATIONAL THERAPY (MOT/OTD)

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Occupational Therapy (OT) is a health profession concerned with promoting health and well-being. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. OTs achieve this outcome by working with people and communities to enhance their ability to engage in the occupations they want to, need to, or are expected to do, or by modifying the occupation or the environment to better support their occupational engagement. Common occupational therapy interventions include helping children with disabilities to participate fully in school and social situations, helping people recovering from injury to regain skills, and providing supports for older adults experiencing physical and cognitive changes. The types of services that OTs provide include customized treatment programs to improve people's ability to perform daily activities; evaluation and treatment to develop or restore sensorimotor, cognitive, and psychosocial performance skills; comprehensive home and job site evaluation with adaptation recommendations to make them safe, conserve energy, enhance comfort, independence and productivity; adaptive equipment recommendations and usage training; and guidance to family members and caregivers.

The U.S. Bureau of Labor Statistics projects a 29 percent increase in occupational therapy jobs between 2012 and 2022, which is much higher than other professions. Moreover, U.S. News & World Report ranked OTs number nine in its list of the best health care jobs in 2015, so the future looks bright. The median annual wage for occupational therapists was \$81,910 in 2016.

OCCUPATIONAL THERAPY SCHOOL

Successful completion of a Master's degree in Occupational Therapy (MOT) is required to practice as an occupational therapist in the United States. Optional degrees include a Doctorate in Occupational Therapy (OTD) or Ph.D. degree. In addition to coursework, students complete at minimum six months of supervised clinical internships in a variety of health care and community settings. Upon graduation, an array of opportunities and practice settings are available to licensed OTs that include working in private clinics, hospitals, corporations, homes, schools, community centers, psychiatric hospitals, health centers, and wellness resorts. For licensing, students must graduate from an accredited program, as well as pass a certification examination.

ACADEMIC PREPARATION

The most competitive applicant has seriously investigated the field, taken the proper prerequisite courses, and given much thought to the reasons for selecting occupational therapy as a career. Criteria used in the selection of applicants for occupational therapy programs include GPA, work experience and/or exposure to the field, letters of recommendation, personal statement, applicable test scores (such as the Graduate Record Exam, or GRE), extracurricular activities, and interview scores. GPA ranges fluctuate with each applicant pool and each school. For more information on occupational therapy as a career, visit the [American Occupational Therapy Association](http://www.aota.org).

COURSE REQUIREMENTS

CSULB courses which fulfill admission requirements for some U.S. Occupational Therapy programs:

Students maintain responsibility for verifying course selection with individual programs.

Coursework	CSULB Courses	Units
Human Anatomy and Physiology with Lab	Biology 208: Human Anatomy Biology 207: Human Physiology	4, 4
General Biology with Lab	Biology 211 & 212	4, 4
One year of General Physics with Lab	Physics 100A & 100B OR 151 & 152	4, 4
One course in Statistics	Biology 260 OR Kinesiology 483	3
General Psychology	Psychology 100	3, 3
One year of English	English 100 AND another course from the English department such as: 102, 180, 300	3, 3

IMPORTANT FACTORS CONSIDERED FOR SUCCESSFUL APPLICANTS

CLINICAL EXPOSURE: Many programs require applicants to have volunteer or paid experiences working with patients under the supervision of a licensed occupational therapist. The program may specify the settings and types of experiences required. These experiences are an important factor in the admissions process. Students should respectfully contact occupational therapy clinics, hospitals, long-term care facilities (e.g., nursing homes), and other healthcare settings in the area to find opportunities.

LETTERS OF RECOMMENDATION: Many programs require 1-4 letters of recommendation as part of the admissions process. Programs may require references from a particular individual, such as an occupational therapist, science professor, or academic advisor. If references are required, select individuals who meet the program's requirements, know the student well, and can speak to maturity, dependability, dedication, compassion, communication skills, leadership, and any hands on experience in the field.

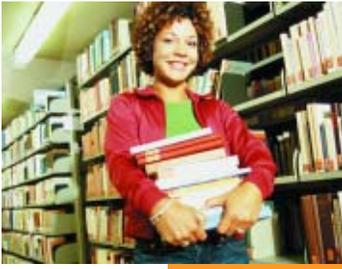
STANDARDIZED TEST: Some programs require the [Graduate Record Examination \(GRE\)](#) for admission.

ADMISSIONS CYCLE: All prerequisite courses must be completed by time of matriculation. Most OT programs use rolling admissions and deadlines vary between fall and spring. Check individual OT schools and consult with your OT advisor on admission deadlines. Competitive applicants will be invited for an interview. All applicants must submit consent for a criminal background check.

ADDITIONAL RESOURCES

- [American Occupational Therapy Association \(AOTA\)](#)
- [Occupational Therapy Centralized Application Service \(OTCAS\)](#)
 - [OTCAS: participating educational programs](#)

For more information on Occupational Therapy, visit www.aota.org and see your HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events.



Resources for students
from The American
Occupational Therapy Association

Your career in Occupational Therapy

Why I Chose Occupational Therapy

Current Students Share What Attracted Them to the Profession

■ Finding “a perfect fit” in health care

Melanie Barber, Occupational Therapy Student

Columbia University, New York, New York

When I was 16, my grandfather suffered a severe stroke and was sent to a rehabilitation center. At that time I had never heard of a profession called occupational therapy. Upon visiting my grandfather, I witnessed several health care professionals working to rehabilitate him. I have always wanted to pursue a profession in which I could help people, and I thought physical therapy would best complement my natural abilities. But then I met the occupational therapist. To this day I don't remember her name, but as I watched her work with my grandfather I realized that I had found what I was looking for. What I found was that occupational therapy addressed the vital importance of people's psychological and emotional well-being, as well as their physical needs. I was a psychology major in college, and I wanted to continue to use this knowledge. I wanted to be in a health care profession where I could spend quality time with my patients, and help them to improve their quality of life in all aspects. Occupational therapy was a perfect fit. I have found that occupational therapy is one of the most holistic health care professions, and I am proud to have chosen this as my career path. It is a profession that requires sensitivity, understanding, and compassion; all of the characteristics that I value tremendously. Occupational therapy is a career that is certain to contribute much to society and bring enormous self-fulfillment. A quote by Ralph Waldo Emerson expresses this perfectly: “To know even one life has breathed easier because you have lived; this is to have succeeded.”

■ Bridging education and medicine

Brandi Buchanan, Occupational Therapy Student

University of Southern California, Los Angeles, California

Although my first desired occupation was to become a librarian, I was quite young when I changed my mind and realized that I really wanted to be a teacher. And with a mother working in the medical field, I was also fascinated by medicine and opportunities to help others achieve optimum health. So through my mom, who was familiar with the profession of occupational therapy, I found a career that bridged education with medicine; a profession that could teach and educate others about the body as well as how to achieve health and wellness.

While completing several hundred volunteer hours in a variety of occupational therapy settings, including a leprosy hospital in South America, I came to the realization that becoming an occupational therapist was my calling.

Now, while nearing the completion of my clinical occupational therapy doctorate (OTD) in public policy and advocacy, and also working in a private pediatric clinic, the most difficult part of becoming a practicing occupational therapist is deciding which of the many avenues of occupational therapy that I want to pursue. I have already found the profession of occupational therapy to be fascinating, rewarding, and challenging, and filled with countless opportunities to serve one's community, one's country, and one's world.

■ Finding a path to a career along a friend's path to recovery

Erin Cokeh, Occupational Therapy Student

University of Southern California, Los Angeles, California

It seemed like any other regular day. I had come home from my part-time job as a physical therapist aide, and my teenage sister, Evadne, just came home from school. The phone rang, and I answered it. "Hello?" I said. The voice on the other side seemed to be a mixture of emotions—frightened, scared, disturbed. It was our next door neighbor, who went to the same high school as my sister. "Jennifer was hit by a car after school. We don't know if she's even alive. I just saw it happen and the ambulance took her away." Jennifer was Evadne's best friend, and a girl that I had been mentoring throughout her high school years. They were just about to finish their junior year. Because I am 5 years older than them, they often came to me for advice for just about everything. And now, Jennifer's life was held by just a string of hope.

Jennifer had been an honors student, pushed hard by her parents who wanted only the best for her. She was also a talented dancer who had taken classes since she was very young, and in high school, she was teaching younger children at a local dance studio. As I looked at her from the window of the intensive care unit, it was hard to believe that it was the same girl, now fighting for her life. Jennifer was in a very deep coma, and no one knew if she would ever come out of it. Her parents, relatives, and friends took turns around the clock, keeping watch over her in case she woke up. It was a miracle that she survived the accident at all; she had been walking across the street after school when a car did not stop for her at the crosswalk. At the impact Jennifer bounced off the windshield head first, but instead of landing on her head she landed on her backpack, which helped cushion her fall. Her hit to the head was from the secondary impact. Her parents had always wanted her to go to a good college and get a good job. Now, all they wanted for her was to survive and, if possible, have a normal life.

As an answer to many prayers, Jennifer woke up. She could barely talk or move because of an upper motor neuron injury as a result of her hitting her head against the pavement. Due to her brain surgery, the surgeons had to shave a portion of her long hair. What really impressed me was her family's determination for Jennifer to have as normal a life as possible, even if it meant bringing her trendy clothes for her to wear in the hospital, fixing her hair to make it look as though it was not shaved, and painting her fingernails, things that she would typically do before her accident.

I visited Jennifer often at the Children's Hospital in Los Angeles, and watched as the occupational therapist worked with her. They did such fun things to help her regain her motor skills, such as baking cookies, trying to walk her dog, who came to visit her at the hospital one day—things that she enjoyed. Working as a physical therapist's aide, I noticed a vast difference in motivation between the patients who had only physical therapy, who rarely did their exercises when told, and Jennifer, who enjoyed the activities that the occupational therapist planned for her. And Jennifer got better. Slowly, she regained her ability to walk and move in a functional way—initially not as well as she used to, but she was able to get around.

At this point in time, I had to be out of the country for 6 months, and when I came back Jennifer was walking normally again, and had started her senior year of high school. Despite all of this she was able to get into the University of California, Irvine, and is currently a full-time college student there. Her occupational therapist still guides her in activities that she keeps active in, and

dancing, an occupation that she had before she was injured, was a major part of her therapy and rehabilitation. It was something that she was motivated to do, and it helped her look forward to experimenting with different ways that she could move.

Seeing Jennifer go through this whole process, as painful as it was for herself and her family, made me more aware of how the role of an occupational therapist could be so important in one's life. Yes, Jennifer could not have survived the accident without the help of brain surgeons and good doctors, but it was the occupational therapist who helped her have a higher quality of life than anyone ever hoped for—one that is meaningful to her. This inspires me to know that I can make a difference in the lives of others, simply by caring for my patients and being aware of their needs and what is meaningful for them in their own lives.

■ Creativity, imagination, and “puzzle solving”

Stacy Landau, Occupational Therapy Student

Ithaca College, Ithaca, New York

I always knew that I wanted to have a career in a health-related profession, because I was extremely interested in medicine and I wanted to work in a profession that would enable me to work with other people on a daily basis. I decided to become an occupational therapist because I wanted to help people, and that is exactly what occupational therapists do: they assist people in becoming independent.

The profession of occupational therapy appealed to me because occupational therapists can work with clients of all ages and they can work in numerous settings, such as hospitals, schools, or private clinics. Occupational therapy also interested me because occupational therapists have the opportunity to be creative and imaginative in catering their therapeutic interventions to specific clients. I like to think of occupational therapists as puzzle solvers, because they assist clients in solving how to complete tasks that they may or may not have been able to do in the past.

My experiences in the field of occupational therapy, which include my education, fieldwork, and being an active member of the American Occupational Therapy Association, have been extremely rewarding, challenging, and enlightening, and I would definitely recommend the profession to anyone.

■ Direct involvement offers many rewards

Chrisha McGann, Occupational Therapy Student

University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma

I have always been attracted to the field of occupational therapy by the wide range of opportunities it encompasses. Through my work experience with adults with developmental disabilities, I have seen that occupational therapists can improve an individual's standard of living and allow one a greater level of independence and self-worth. I have also seen and been a part of occupational therapists working with children with developmental disabilities by improving strength and functioning to achieve developmental milestones and their ability to just be kids. At the same time, the therapists are teaching parents ways to enhance their child's development and supporting them in their child's occupations.

Occupational therapy can also teach a person ways of adapting and being as independent as possible after a stroke, spinal cord injury, or traumatic brain injury, to name a few medical problems. In addition, I have seen persons with mental health issues and ineffective coping skills find the help they need through occupational therapy. Occupational therapy is a field that will allow me to help others learn how to help themselves through meaningful work and activity.

I like the direct involvement occupational therapists have with their clients, and I know that occupational therapy will offer me challenging and fulfilling work on a daily basis and throughout my career.

■ Therapy (and a career) with a difference

Lisa Griggs-Stapleton, Occupational Therapy Student

University of New Mexico, Albuquerque, New Mexico

While investigating careers in health care, I asked to observe an occupational therapy session. I was sold. I left the clinic thinking, “People get to have *fun* in therapy?!” The session wasn't like any other health care I had seen. I was used to the idea that most people don't like going to the therapist, but occupational therapy was different. People, especially children, enjoy the sessions and sometimes don't want to leave. Occupational therapists have the privilege of helping people learn or relearn how to connect with their environment and we get to have fun while we do it. I am grateful to be part of such a wonderful profession.

■ Family caregiving leads to professional inspiration

Jacquelyn Nichols, Occupational Therapy Assistant Student

Erie Community College, Williamsville, New York

Major inspiration for my becoming an occupational therapy assistant came from the interaction with many health care professionals. While caregiving for my dad, until his death, the networking of health care for daddy would leave my mouth hanging open at times. Having the knowledge of being able to affect the physical and mental well-being of a person, whether elderly or young, is truly special.

I made the choice that I wanted to have numerous opportunities to help people regain wellness and continue with a healthy and purposeful life. Occupational therapy treats the whole person and engages him or her in work, self-care, and play so that the deficit or disability can be at the best level possible. I have always liked the position of supporting and helping. The interaction of all the health care professionals that my father needed was absolutely special, and I want to be part of that network.

If you have specific questions about a career in occupational therapy, please contact educate@aota.org.

Visit www.aota.org for more information about the profession and the activities of the American Occupational Therapy Association.



The American Occupational Therapy Association

Occupational Therapy's Role in Diabetes Self-Management

Occupational therapy practitioners can play a strong role in diabetes education and self-management for individuals who are likely to develop the disease as well as those who are already diagnosed.

Diabetes is characterized by hyperglycemia (high blood glucose) resulting from the body's inability to use the sugar from food eaten for energy. It is a systemic disease that can affect the body on both an immediate and a long-term basis. The most prevalent acute complication is hypoglycemia or low blood glucose. Hypoglycemia is a potentially life threatening condition requiring immediate and appropriate treatment. When blood glucose levels are persistently high, a wide range of chronic complications can occur. These can include kidney disease, vision loss, heart disease, stroke, and neuropathy, among others. Many of these long-term complications can be barriers to performance of activities necessary to successfully self-manage diabetes. Diabetes is also frequently accompanied by depression and anxiety.



Occupational therapy practitioners are experts at analyzing the performance skills and patterns necessary for people to engage in their everyday activities (occupations). They can effectively educate and train persons at risk for or who currently have diabetes to modify current habits and routines and develop new ones to promote a healthier lifestyle and minimize disease progression. Occupational therapy practitioners can assist clients to develop simple, concrete, measurable, and achievable self-management goals consistent with the seven behaviors advocated by the American Association of Diabetes Educators (AADE). These AADE 7™ Self-Care Behaviors are: (1) healthy eating, (2) being active, (3) monitoring, (4) taking medications, (5) problem solving, (6) healthy coping, and (7) reducing risks.¹ Some behaviors, such as *healthy eating*, are self-explanatory, whereas others are more involved. For example, *monitoring* includes not only blood glucose testing but also tracking blood pressure, weight, foot health, and “steps walked” to ensure the person is getting enough physical activity. Similarly, *reducing risks* encompasses a diverse group of behaviors including, but not limited to, smoking cessation; foot self-inspections; maintenance of personal health records; and regular eye, foot, and dental exams, creating a need for clients to track and diligently attend appointments with their diabetes health care team.



According to AADE's disabilities position statement, occupational therapy practitioners are viewed as part of the diabetes self-care team.² Occupational therapy practitioners are knowledgeable about the impact of medical conditions on an individual's day-to-day and long-term functioning. Through their holistic approach they address the physical, cognitive, psychosocial, and sensory aspects inherent in the performance of everyday life activities. Occupational therapy practitioners develop a collaborative relationship with their clients to prioritize what they want and need to accomplish—which is critical in a disease requiring self-management 24 hours per day, 7 days per week. Occupational therapy practitioners can modify or adapt how their clients perform their desired self-care tasks to promote ease and success in achieving their goals in managing this disease.

What Can an OT Practitioner Do for a Person With Diabetes?

Occupational therapy practitioners can fill diverse roles when working with clients to prevent and manage diabetes, including those who have developed a disability. They can incorporate general diabetes information into their instruction or they can specialize by adapting information to a particular population (e.g., persons with vision loss or amputations) or to a particular topic (carbohydrate counting or physical exercise). By way of example, the occupational therapy practitioner can:

- Promote healthy food choices and safe cooking methods;
- Instruct in safe and appropriate ways to incorporate exercise and physical activity into daily routines;
- Provide techniques to organize and track medications;
- Instruct in the use of low-vision and nonvisual devices to draw up and measure insulin;
- Instruct and provide strategies to successfully use a talking blood glucose monitor or use any blood glucose monitor one handed;
- Incorporate protective techniques and compensate for peripheral sensory loss in activities that involve exposure to heat, cold, and sharp objects;
- Educate in techniques to structure time and simplify activities to cope with depression such as breaking down dietary changes and an exercise program into manageable steps and incorporating them into present daily routines.³

Who Can Benefit, and Where Are Such Services Provided?

Persons who can benefit from occupational therapy range from those who would like to implement a lifestyle that reduces the risk of diabetes to those who already have diabetes and complications that interfere with their ability to complete self-care activities and manage the disease. Clients of any age with diabetes can benefit from occupational therapy to address their specific self-care needs and preferences.

Occupational therapy can be provided in a wide range of settings, such as a client's home, an outpatient clinic, or a hospital. It can also be provided through a program that focuses on wellness and prevention or one that focuses on medical treatment and rehabilitation for complications resulting from diabetes. Sometimes occupational therapy is available in a more specialized setting such as a diabetes clinic or low vision program. Services can be provided on a one-to-one basis or within a group and, depending on the topic, can include oral instruction, demonstration, hands-on experiences, group activities, and role playing.

Conclusion

Occupational therapy focuses on lifestyle modification, health promotion, remediation of physical and visual impairments, and maximizing self-care independence, all of which are directly and adversely affected by diabetes and its complications. Occupational therapy practitioners focus on helping clients take charge of their diabetes as opposed to being controlled by it, so they can participate in everyday activities.

References

1. American Association of Diabetes Educators. (n. d.). *AADE 7™ self-care behaviors*. Retrieved December 4, 2010, from <http://www.diabeteseducator.org/ProfessionalResources/AADE7>
2. Williams, A., Sokol-McKay, D. A., Bartos, B., Chynoweth, M., Gerwitz, A., Kleinbeck, C., et al. (2009). Disabilities position statement of the American Association of Diabetes Educators. *Diabetes Educator*, 35(1), 41–44.
3. Sokol-McKay, D. A. (2010). Vision rehabilitation and the person with diabetes [Special issue: Diabetes care]. *Topics in Geriatric Rehabilitation*, 26(3), 241–249.

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Living Life To Its Fullest™
O C C U P A T I O N A L T H E R A P Y

Occupational therapy enables people of all ages live life to its fullest by helping them to promote health, make lifestyle or environmental changes, and prevent—or live better with—injury, illness, or disability. By looking at the whole picture—a client's psychological, physical, emotional, and social make-up—occupational therapy assists people to achieve their goals, function at the highest possible level, maintain or rebuild their independence, and participate in the everyday activities of life.





Veterinary Medicine



General Description:

Whether they're pets, livestock, or working animals, animals matter to individuals and society. Every community needs veterinary professionals to provide animal health care, but veterinarians also do many other kinds of jobs. They make sure the nation's food supply is safe. They work to control the spread of disease. They conduct research that helps humans and animals. Veterinarians are at the forefront of protecting the public's health and welfare.

What are some common daily activities/experiences?

With a wide variety of careers in veterinary medicine, daily activities / experiences will depend on the career sector one decides to pursue. The most common activities / experiences would involve working directly with the well-being of animals of all species. Veterinarians also provide critical services that directly impact the well-being of humans as well.

What are 3-5 personal characteristics important for happiness and success in your profession?

- Empathy
- Compassion
- Communication
- Problem-solving

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- What do I have to offer the veterinary profession and how well do I understand the profession?
- Am I qualified to apply to the institution(s) I wish to apply to?
- Do I fully understand the financial issues surrounding the profession?

Preparing for Admission:

- **Academic Prerequisites:** [Click here](#) for a chart (pdf)
- **Standardized test:** [Graduate Record Exam](#)
- **Experience / Exposure requirements:** [Click here](#) for college specific information
- **Letters of recommendation:** [Click here](#) for information
- **Resources for researching schools:** The VMSAR handbook costs \$35.00 plus shipping and handling: aavmc.org/publications/vmsar.aspx

The Admissions Cycle:

- CAS(es): Veterinary Medical College Application Services (VMCAS) – www.aavmc.org/Students-Applicants-and-Advisors/Veterinary-Medical-College-Application-Service.aspx
 - Application opens: May
 - Application can be submitted:
 - Number of schools participating: 39 of 49 fully-accredited programs use VMCAS
 - Fees: \$210 for first program; \$110 for each additional program
 - Fee assistance: www.aavmc.org/applicant-responsibilities/fees.aspx#reimbursement

NAAHP Fact Sheet for Health Professions Advisors

Veterinary Medicine

- Letters of rec logistics: send letters through the eLOR portal. Some schools do not accept committee letters.
- Standardized test logistics: send scores directly to schools
- Transcripts: send directly to VMCAS
- Instruction manual and FAQ: [help.liasonedu.com/VMCAS Applicant Help Center](http://help.liasonedu.com/VMCAS_Applicant_Help_Center)
- CAS phone contact for **Students & Advisors**: 202-682-0750 / Office: 202-371-9195
Email contact for students: vmcas@aavmc.org
- Information for Advisors
 - Advisor portal: uap.webadmit.org
 - CAS Email contact for advisors: advisors@aavmc.org

The Admissions Process:

- Total number of applicants in 2017: 7,076
- Total number of first-year students in 2018: 3,371
- Total number of students in 2017: 12,768
- Public data for AAVMC can be found online: aavmc.org/about-aavmc/public-data.aspx

Learn More about the Profession

Training & Career Opportunities

- Number of years: four
- Degree attained: DVM or VMD
- Total number of graduates in most recent academic year: 2,947 total graduates in 2017. [Click here](#) for more data

Key Resources for Students

- [VetSchool Student Engagement System \(VSES\)](#)
- [AAVMC resources](#)

Social Media

- AAVMC [Facebook](#) page
- AAVMC [Twitter](#) page

Advisory Council Professional Association Partner Information

- **American Association of Veterinary Medical Colleges (AAVMC):** aavmc.org/
- **Mission**
AAVMC provides leadership for and promotes excellence in academic veterinary medicine to prepare the veterinary workforce with the scientific knowledge and skills required to meet societal needs through the protection of animal health, the relief of animal suffering, the conservation of animal resources, the promotion of public health, and the advancement of medical knowledge. AAVMC pursues its mission by providing leadership in: Advocating on behalf of academic veterinary medicine; Serving as a catalyst and convener on issues of importance to academic veterinary medicine; Providing information, knowledge and solutions to support members' work;

- Facilitating enrollment in veterinary medical schools and colleges; and Building global partnerships and coalitions to advance our collective goals.
- **Size of organization, Number of member institutions:** [Click here](#) for a full member list.

Advisory Council Contact Information

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Date updated: January 2019

This fact sheet has been created for NAAHP members and should not be shared outside of the NAAHP community.

For more information on many health professions, we recommend the NAAHP publication, [Health Professions Admission Guide: Strategies for Success](#), available on the NAAHP website.

VETERINARY MEDICINE (D.V.M.)

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Veterinarians help animals and people live longer, healthier lives and serve society by preventing and treating animal diseases, improving the quality of the environment ensuring the safety of food, controlling diseases transmitted from animals, and advancing medical knowledge. Prospective veterinarians must have good manual dexterity, an affinity for animals and the ability to get along with animal owners. Additionally, they should be able to quickly make decisions in emergencies. In 2014, there were 102,583 veterinarians practicing in the United States. The majority of veterinarians are in private practice, although significant numbers are involved in preventive medicine, regulatory veterinary medicine, military veterinary medicine, laboratory animal medicine, research and development in industry, and teaching and research in a variety of basic science and clinical disciplines (AVMA, 2015).

U.S. veterinary colleges/schools graduate an average of 3,000 students annually. Employment of veterinarians is expected to grow 12 percent from 2012 to 2022, about as fast as the average occupation. In 2012, the median annual earnings of veterinarians in practice was \$84,460. There is a geographic shortage of veterinarians in some mostly rural areas that varies by state.

VETERINARY MEDICINE

There are 30 medical colleges/schools accredited by the American Veterinary Medical Association in the U.S., 5 in Canada and 13 in other countries. Prospective veterinarians must graduate from a 4-year program at an accredited college of veterinary medicine and obtain a license to practice, which is controlled by each state or province.

Veterinary graduates who plan to work with specific types of animals or specialize in a clinical area, such as pathology, surgery, radiology, or laboratory animal medicine, usually complete a 1-year internship. Interns receive a small salary but usually find that their internship experience leads to a higher beginning salary, relative to other starting veterinarians. Veterinarians who seek board certification in a specialty must also complete a 2- to 3-year residency program that provides intensive training in specialties, such as Internal Medicine, Oncology, Radiology, Surgery, Dermatology, Anesthesiology, Neurology, Cardiology, Ophthalmology, and Exotic Small Animal Medicine.

ACADEMIC PREPARATION

Most veterinary medical colleges will only consider applicants who have met a minimum grade point average (GPA). Those who receive offers of admission usually have a **GPA of 3.56 or better**. Any major is appropriate as long as applicants take the required prerequisite courses. The prerequisites for admission vary by veterinary medical college. It is not necessary that a student complete a program specifically labeled "pre-veterinary" or "pre-vet." It is, however, necessary for applicants to complete all prerequisite requirements before enrolling in one of the 30 U.S. or 5 Canadian veterinary medical colleges/schools.

Standardized test requirements also vary at each school. Applicants must submit test scores from the Graduate Record Examination (GRE-general and/or subject tests) or the Medical College Admissions Test (MCAT), depending on the preference of each college.

CLINICAL EXPOSURE

Veterinary medical colleges weigh heavily a candidate's veterinary and animal experience in admissions decisions. Formal experience, such as work with veterinarians or scientists in clinics, agribusiness, research, or in some area of health science, is particularly advantageous. Less formal experience, such as working with animals on a farm or ranch or at a stable or animal shelter, is also helpful. Students must demonstrate ambition and an eagerness to work with animals. Many schools require experience in more than one type of animal setting.

COURSE REQUIREMENTS

CSULB courses which fulfill admission requirements for [Western University of Health Sciences, College of Veterinary Medicine](#):

Students maintain responsibility for verifying course selection with individual programs.

Coursework	CSULB Courses
One year of Organic Chemistry with lab	Chemistry 220A & 220B + 320 L (Chem. & Biochem. majors) OR 220A w/ 223A & 220B w/ 223B
One or more courses in Biochemistry	Chemistry 441A OR 441B OR 448
Upper Division Biological & Life Sciences all with Lab	Biology 304, 313, 316, 324, 332, 340 w/ 340L, 342 w/ 342L, 345 w/ 345L, 350, 353, 355 w/ 355L, 411, 421, 423, 425, 430 (no lab), 444 (no lab), 453, 448 (Cannot double-count)
One course in Statistics	Biology 260 ORSTAT 108, OR HDEV 250
One course in Microbiology	Biology 311
Genetics or Molecular Biology	Biology 370 OR 340
One course in Physiology	Biology 342 OR 345
One year General Physics with Labs	Physics 100A & 100B
One Year English Composition	English 100, 101, 102, 300
Humanities	Art, Foreign Language, Political Science, History etc.

ADDITIONAL RESOURCES

- [Veterinary Medical College Application Service \(VMCAS\)](#)
- [Association of American Veterinary Medical Colleges \(AAVMC\)](#)
 - [AAVMC: Pre Vet Student Resources](#)

See your HPAO advisor for more information on Veterinary Medicine, the application process, and a list of upcoming workshops and events.



Vet School Admission 101

Give yourself the best chances of being admitted



We're sure you've already heard how competitive it is to get into veterinary school. Sure, it's competitive – but it's not impossible. If you've got good science and math skills and an interest in helping animals, follow your dream. Who better to help you than the people who've already been there?

Grades

Duh, you say. Of course you have to have good grades to be competitive. Although a 4.0 will certainly help you, it's not an absolute necessity.

Why are grades important? They can indicate your intelligence, your study habits, and your dedication and drive to succeed. Those are all qualities veterinary schools are looking for when they evaluate applicants. When a school sees an "A," they think you studied hard, did well, and learned.

So, what if your grades are *good* but not *great*? Does that mean you've got no chance? No, it doesn't. Veterinary schools are looking for well-rounded students. They're looking for future leaders. You can make yourself a better candidate by getting good (or great) grades as well as experience and leadership skills.

Prerequisites

You could have a 4.0 GPA and still not get into veterinary school if you haven't completed the prerequisites required for admission. Make sure you know your prospective schools' requirements when you plan your undergraduate classes. Fortunately, most schools have similar requirements. For more information and links to U.S. veterinary colleges, visit the Association of American Veterinary Medical Colleges (AAVMC) website at www.aavmc.org.

That said, check out your school's undergraduate catalog for courses that aren't on the vet school prerequisite list but might be good courses to give you a "leg up" and better prepare you for the coursework you'll have in vet school. For example, consider taking upper-level anatomy & physiology, zoology, microbiology, animal science/animal production, nutrition, and histology courses, to name a few. It's possible that taking these courses as an undergrad can make the comparable vet school classes much less stressful for you because you've already got a good foundation in that subject.

Majors

You don't have to be a pre-vet major to get into vet school – you just need to get the prerequisite coursework completed and do well. We've seen vet students whose undergraduate majors were math, engineering, English, and many others. Once you're in vet school, the playing field is equal. It's important to enjoy your undergrad studies by picking a major that you are passionate about—not simply the "best one" for getting into vet school.

Experience

If you've been in 4-H, FFA or a similar group, that's great experience that should go on your veterinary school admission form. Similarly, working with animals in any way can be of value. For example, volunteering at shelters or rescues can provide animal handling experience that will help make you a better candidate.

It goes without saying that volunteering or working for a veterinarian is very important. Not only does it expose you to your potential career (so you know what you're getting into, so to speak), but it also might provide a good recommendation for you from the veterinarian.

Varied experience is also helpful. If you have the opportunity to work in a research lab or for veterinarians who work with different species, that's a bonus that can make you more appealing to a veterinary school admissions committee. Get as much experience as you can while you have the opportunity.

Leadership Skills

Leadership experience, such as holding an office in student government or other groups, is a big plus. Get involved in your pre-vet club, student government, fraternity/sorority, or other organization. If one of these doesn't exist, get some others together and start a club of your own!

Communication Skills

Because veterinarians' patients can't really talk and tell them what's wrong, people tend to think that communication skills are less important. That couldn't be more untrue. It's essential for veterinarians to have good communications skills so their clients can understand what's going on with their animals and do their parts to help resolve the problem. Coursework or extracurricular activities that improve your communication skills are definitely helpful...not to mention it can help you when it comes to the interview.

Most of us dread public speaking, but that's all the more reason to take a class or two. Becoming more comfortable speaking to larger audiences will come in handy later in life.

Letters of Recommendation

Get to know your professors. Sure, a professor can write a letter stating that you got an "A" in their class, but can they say anything else about you? A good letter of recommendation comes from a person who knows who you really are. You can get to know professors by attending office hours, volunteering in their research projects, or joining a club that they advise. Check with the vet schools you are applying to for their requirements of who they want the letters to come from—usually they want to hear not only from your professors, but also vets that you have worked with.

Standardized Tests

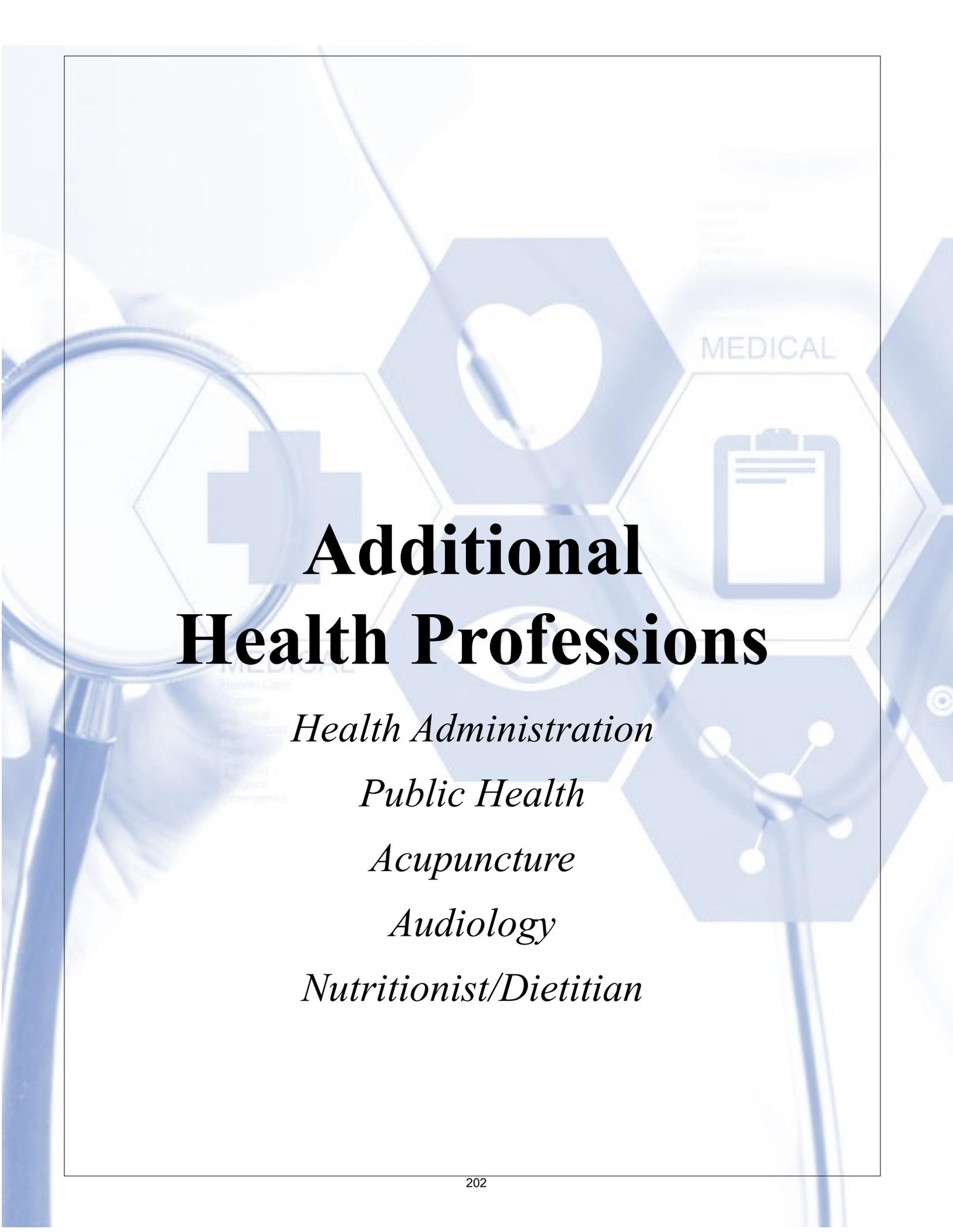
Standardized tests? Again? And you thought that was over when you finished high school! The Graduate Record Examination (GRE) is required by most veterinary schools, and some also require the Biology GRE. The Medical College Admission Test (MCAT) is also accepted by some schools in place of the GRE. Find out where you can take the exam and what preparation you need to succeed. For a listing of each accredited veterinary school's requirements, go to the AAVMC site at www.aavmc.org. More information can be found at <http://www.ets.org/gre/>.

Have fun!

All work and no play can actually make you a less desirable candidate. Not all of your courses and extracurricular activities should be 100% focused on meeting the admission requirements. Do the things you like, join the clubs you find fun, and enjoy your life.

What if you don't get in?

You're not alone, and it doesn't mean you don't have what it takes. Contact the admissions staff and request feedback on your application, then address the deficiencies and reapply next year.



Additional Health Professions

Health Administration

Public Health

Acupuncture

Audiology

Nutritionist/Dietitian

General Description:

Medical and health services managers, also known as healthcare executives or healthcare administrators, plan, direct, and coordinate the operation of hospitals, health systems, and other types of organizations. They have responsibility for facilities, services, programs, staff, budgets, relations with other organizations, and other management aspects, depending on the type and size of the organization. They also work in the public sector, for example, in health departments, or in the private sector, such as with pharmaceutical companies, health insurance providers, consulting firms, or companies that make medical supplies and equipment.

What are some common daily activities/experiences?

- Improve efficiency and quality of healthcare service delivery
- Keep up to date on new laws and regulations to ensure facility compliance
- Supervise assistant administrators and support staff
- Manage the facility finances, including patient fees and billing
- Create work schedules and coordinate staff
- Represent the facility at investor meetings or on governing boards
- Maintain and organize facility service records
- Communicate with medical staff and department heads

What are 3-5 personal characteristics important for happiness and success in your profession?

- *Analytical skills* — Medical and health services managers must be able to understand and follow current regulations and be able to adapt to new laws.
- *Communication skills* — Managers must be able to communicate effectively with other health professionals.
- *Detail-oriented* — Medical and health services managers must pay attention to detail, as they might be required to organize and maintain scheduling and billing information for very large facilities.
- *Interpersonal skills* — Medical and health services managers need to be able to discuss staffing problems and patient information with other professionals, such as physicians and health insurance representatives. They must be able to motivate and lead staff.
- *Problem-solving skills* — Managers are often responsible for finding creative solutions to staffing or other administrative problems.

Preparing for Admission:

- Prerequisite coursework
- Standardized Tests
- Experience/Exposure
- Letters of Recommendation
- Resources for researching schools : AUPHA Find a Program Search Engine:
<http://www.aupha.org/resourcecenter/futurestudents/find-a-program>

The Admissions Cycle:

- CAS(es): Healthcare Administration, Management & Policy Centralized Application Service (HAMPCAS), <https://hampcas.liaisoncas.com/applicant-ux/#/login>
 - Application opens: September 2018

- Application cycle closes: August 2019. Specific deadlines are available on the HAMPCAS applicant calendar and in the [HAMPCAS Directory of Schools](#).
- Number of schools participating: 43 of AUPHA's Organizations representing 136 graduate member programs.
- Fees, fee waivers: Application processing fees are dependent on the number of designated programs/degrees selected by the applicant. The first designation is \$115.00 and each additional designation is \$40.00. HAMPCAS does not currently offer fee waivers.
- Letters of rec logistics: Applicants may designate a minimum of two and a maximum of five letters of recommendation. HAMPCAS provides a reference portal within the application in which electronic letters are accepted from recommenders.
- CAS contact for students: (617) 612-2882, HAMPCASinfo@HAMPCAS.org
- CAS contact for advisors: Jason Walker, (202) 804-4214, jwalker@aupha.org
- HAMPCAS on Facebook: <https://www.facebook.com/HAMPCAS>
- HAMPCAS on Twitter: <https://twitter.com/HAMPCAS>

The Admissions Process:

	2015-16 Cycle	2014-15 Cycle	2016-17 Cycle
Applicants	387	366	451
Applications	858	752	1045
Accepted	204	152	235
Acceptance Rate	23.78%	20.21%	22.49%
Gender Breakdown	67.6% women / 31.4% men	55.7% women / 44.3% men	64.4% women / 35.6% men
Ethnicity Breakdown	39% white / 61% person of color	50% white / 50% person of color	44% white / 56% person of color

- **Geographic Data:** Primarily the United States but also several every year from other countries, including India, Nigeria, China, Canada, Saudi Arabia
- **Majors generally include something in the Health or Business arenas. These include:** Biology, Business Admin/Mgmt, Community Health, Economics, Health Science, Medicine, Pharmacy, Nursing, Political Science, Psychology, and Public Health

Learn More about the Profession

Training & Career Opportunities

- Number of years: Undergraduate 4; Graduate 6
- Degree(s) attained: MHA, MPH
- Total number of graduates in most recent academic year (where reliable data is available):

	Graduate Programs	Graduate Students	Undergraduate Programs	Undergraduate Students
2014	401	27,268	308	45,114
2015	414	28,152	315	46,140

NAAHP Fact Sheet for Health Professions Advisors

Health Administration

Key Resources for Prospective Students

- Resources for Future Students on the AUPHA website:
<http://www.aupha.org/resourcecenter/futurestudents>

Social Media:

- AUPHA on Facebook: <https://www.facebook.com/aupha>
- AUPHA on Twitter: <https://twitter.com/aupha>

Advisory Council Professional Association Partner Information

Association of University Programs in Health Administration (AUPHA), www.aupha.org

- **Mission**
AUPHA fosters excellence and drives innovation in health management and policy education, and scholarship.
- **Size of organization, Number of member institutions**
 - 6 staff members
 - 88 Undergraduate Program Members
 - 142 Graduate Program Members
 - 5 Doctoral Program Members
 - ≈2500 faculty at member programs
 - 158 Individual Members
- **New institutional members in last three years**
 - College of William & Mary
 - Concordia College
 - Concordia University – Portland
 - D’Youville University
 - Eastern Michigan University
 - Eastern Washington University
 - Edgewood College, School of Business
 - Florida Atlantic University
 - Florida Gulf Coast University
 - Florida International University
 - Georgetown university
 - Grand Valley University
 - Icahn School of Medicine at Mount Sinai
 - Jefferson College of Health Sciences
 - Lake Erie College of Osteopathic Medicine
 - Louisiana State University
 - Lourdes University
 - Metropolitan College of New York
 - Minnesota State University Moorhead
 - Regis University
 - Robert Morris University
 - Samford University
 - Stony Brook University
 - Temple University
 - Trinity University - Executive
 - University of Louisville
 - University of Nevada, Las Vegas
 - University of New Haven
 - University of Phoenix
 - University of Texas at Tyler
 - University of Virginia
 - Xavier University

Advisory Council Contact Information

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Date updated: December 2017

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.



General Description:

Public health professionals work in a variety of different environments including community health centers, local, state and federal health departments, large non-governmental organizations, private corporations, and international health organizations. Public health practitioners treat individuals and focus on preventing disease and injury, promoting healthy lifestyles, and educating entire populations. They implement educational programs, develop policies, administer services, conduct research, and regulate health systems to achieve these goals.

What are some common daily activities/experiences?

Public health professionals also confront complex global health issues, such as improving access to health care, controlling infectious disease, and reducing environmental hazards, violence, substance abuse, and injury. In the past century, public health initiatives have been responsible for increasing life expectancy by almost 30 years in the United States. The broader development and application of population-based prevention programs will continue improving health over the next decades.

What are 3-5 personal characteristics important for happiness and success in your profession?

Public health is an interdisciplinary profession, and successful public health practitioners incorporate leadership, effective communication, data collection, and program management to improve population and community health outcomes. Public health professionals use the necessary skills to tackle the most pressing health concerns at the community, national, and international level.

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

Prospective students of public health should ensure that the institution where they are applying is CEPH-accredited. The Council on Education for Public Health (CEPH) is the nationally recognized accrediting body for both schools of public health and public health programs. (www.ceph.org). The Master of Public Health (MPH) degree is the most common graduate-level degree awarded by schools and programs of public health. The degree is suited for students interested in pursuing a professional career in public health. Common work environments include hospitals, consulting firms, international agencies, state and federal agencies, health departments, managed care organizations, community-based organizations, among others. Students with strong quantitative and research skills should consider an MS which is an academic degree oriented toward students wishing to seek a career in teaching or conducting research at a college or university or other settings.

Preparing for Admission:

- Prerequisite coursework
- Standardized Tests
- Experience/Exposure
- Letters of Recommendation
- Resources for researching schools: aspsh.org/program-finder

The Admissions Cycle:

- CAS(es): SOPHAS, <http://sophas.org/>
 - Application opens: August 18, 2016

NAAHP Fact Sheet for Health Professions Advisors

Public Health

- Application can be submitted: if date is different from above – is there a date of first submission? N/A
- Application system closes: August 4, 2017
- Number of schools participating: 90 out of 106 accredited institutions. Not every institution uses SOPHAS for each program, but if a program is on SOPHAS, students may not apply through any other format. Institutions may choose to have a supplemental application in addition to the SOPHAS application. See sophas.org/program-finder for details about SOPHAS programs, or contact the institution directly.
- Fees: \$135 for first school/program selected, \$50 for each additional school/program selected
- Fee waivers: [SOPHAS Fee Waiver information](#)
- Letters of rec logistics: Letters should be sent electronically to SOPHAS
- Standardized test logistics: MCAT, GRE, and TOEFL scores can be submitted through SOPHAS; other scores should be sent directly to schools.
- Transcripts: Transcripts should be sent directly to SOPHAS in Watertown, MA – do not send any materials to ASPPH/Washington, DC
- Instruction manual and FAQ: <https://portal.sophas.org/sophasHelpPages/frequently-asked-questions/index.html>
- Contact information: (617) 612-2090, SOPHASinfo@sophas.org
- CAS contact for advisors: Guy Piotrowski (gpiotrowski@aspph.org) or Brittney Dunn (bdunn@liaisonedu.com)
- SOPHAS Facebook Page: <http://www.facebook.com/SOPHASapp>

The Admissions Process:

- Advisor portal: N/A
- Approx dates of interviews, offers: Varies; many programs do not require interviews
- Total number of applicants in most recent cycle (through CAS and/or all member programs if known):
- Average # of applications per student: 3
- Total number of first year students (through CAS and all if known): 18,166 in 2015
- Total number of students: 54,112 in 2015

Learn More about the Profession

Training & Career Opportunities

- Number of years: Varies; Masters programs: 1-3 years (generally), Doctoral: 4-7 years (generally)
- Degree attained: MPH, MS, MHA, DrPH, PhD and many other options, including joint degrees
- Total number of graduates in most recent academic year: 18,781 in 2015
- Data on employment of recent graduates, if available: N/A

Key Resources for Students,

- ASPPH [Public Health \(Discover\)](#)
- ASPPH [Public Health \(Study\)](#)

Key Resources for Advisors

- <http://www.aspph.org/public-health-advisors-toolbox/>

For more information on many health professions, we recommend the NAAHP publication, [Health Professions Admission Guide: Strategies for Success](#), available on the NAAHP website.

NAAHP Fact Sheet for Health Professions Advisors
Public Health

Social Media:

- ASPPH on Facebook: <https://www.facebook.com/aspph>
- ASPPH on Twitter: <https://twitter.com/ASPPHtweets>

Advisory Council Professional Association Partner Information

Mission

The **Association of School and Programs in Public Health** (ASPPH) promotes the efforts of schools and programs of public health to improve the health of every person through education, research, and policy. Based upon the belief that “*you’re only as healthy as the world you live in,*” ASPPH works with stakeholders to develop solutions to the most pressing health concerns and provides access to the ongoing initiatives of the schools and programs of public health.

- Size of organization, Number of member institutions: 35 staff, 102 Full members and 4 Associate members

Advisory Council Contact Information

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Date updated: 8/22/2016

Career Advice

Global Health Jobs: What You Need to Know©

By [Oliver Subasinghe](#) on 07 April 2009



Unified Health System staff train nurses in Recife, Brazil, in a program funded by the Inter-American Development Bank. Building local capacity is a key focus of many global health practitioners. Photo by: Willie Heinz/IDB

Afraid of needles? Most jobs in [global health](#) don't require a lab coat or medical degree. This growing field offers career paths ranging from the extremely technical to more generalist positions, from epidemiologist to social marketer.

Global health addresses issues that cut across multiple borders, such as the eradication of tuberculosis - unlike international health, which is seen as tackling problems that mainly affect two countries, such as a cholera outbreak in a border region. Unlike some economic development work, global health can result in nearly instantaneous results, experts say.

"In development, it's hard to see the changes you're making. But in some areas of health, you can actually see the changes year to year," one human resources expert said. "Other changes may take a generation or two."

In response to [growing health inequalities](#), public donors ramped up funding for global health to more than \$12.6 billion in 2006, according to the Organization for Economic Cooperation and Development. Additionally, private entities such as the [Bill & Melinda Gates Foundation](#) have contributed billions more towards health issues.

This expansion should translate into more career opportunities and resources to address [global health challenges](#) - from reproductive health to child survival, infectious diseases to HIV/AIDS, mental health and emergency medicine to nutrition, water and sanitation. Among the emerging issues donors are beginning to address is the treatment and prevention of chronic illnesses like heart disease.

The needed global health workforce may exceed 100,000 by 2020, a U.S. global health professor estimates. They will be working for a variety of international organizations such as the World Health Organization and Red Cross, government agencies such as the U.K.'s Department of International Development, nonprofits like [Path](#), Medecins Sans Frontieres and other emergency aid organizations, as well as companies such as [Pfizer Inc.](#), the drug maker.

Prerequisites

Often, positions in global health require a doctoral degree or a master's of public health (MPH), health administration (MHA), global health or health economics. Even candidates with a medical doctorate or nursing degree may need a master's that covers management, policy, social or economic topics in this multidisciplinary field.

For career switchers with a clinical background, a master's degree can bridge experiences in medical care and development, said a former doctor at the [Pan-American Health Organization](#) who holds a master's of public health.

The theoretical side of global health should also be coupled with some practical volunteer, fellowship or work experience in a resource-deprived community. For example, the U.S. Agency for International Development offers a [global health fellowship program](#) for U.S. citizens to gain practical experience in the field or at its headquarters. St. Louis University's School of Public Health [lists dozens of fellowship](#)

[programs](#) open to people from around the world. Volunteer organizations like Voluntary Service Overseas and the Peace Corps offer many opportunities to work on health-related issues in the field, either directly or indirectly.

Foreign language skills are key to many jobs in global health. Knowledge of Russian, Portuguese and French West African dialects are in demand by global health organizations, one industry expert said. For job seekers in the developing world, a strong command of English or other donor country languages are essential.

But before applying to graduate school or a fellowship, those interested in global health should pick a particular health issue they feel passionate about, recruiters suggest, and then decide on which career discipline would make the best fit.

Global health disciplines

The global health sector may be split into seven broad disciplines: researchers, clinicians, epidemiologists, program managers, program administrators, social marketers and health policy analysts. Along with an advanced degree and field experience, recruiters identified soft skills such as flexibility, cultural sensitivity and the ability to "read" people as important for most global health positions.

Researcher

For those with an interest in curing a neglected disease or finding a low-cost way to deliver AIDS drugs, a career in research may be the right path. As more funds are being devoted to diseases that mainly affect the developing world, such as malaria or leprosy, there is increasing opportunities to study and eradicate these health scourges as a medical researcher at academic institutions, foundations or drug makers.

Research opportunities exist even outside the laboratory, on issues such as health economics or health systems administration. A medical doctorate or postgraduate degree is usually needed for such work. If lab work or academia does not sound appealing, then research utilization - bringing research out of the classroom into the field - might be an alternative path. Academic institutions such as Tulane University Law School's [Payson Center for International Development](#), the [University of Washington's Department of Global Health](#) and [George Mason University's](#) College of Health and Human Services focus on this.

Epidemiologist

Epidemiologists prevent, monitor and respond to disease outbreaks, for instance by designing vaccination campaigns. On a near-daily basis, epidemiologists analyze disease patterns and investigate what started an outbreak. Someone with an interest in biology, statistics and frequent travel into the field may especially like this discipline. International organizations such as WHO and the Pan-American Health Organization are among the major employers of epidemiologists.

Clinician

This includes "traditional" medical professions such as doctor, nurse, midwife, psychologist and other health workers. However, direct contact with patients is rare, as global health programs tend to focus on health systems and management. Still, in some niches - including humanitarian aid and disaster response - there is a need for health workers to directly treat patients.

Program manager

Program managers oversee the design, evaluation, monitoring and implementation of global health programs in the field or at headquarters. This may involve running an immunization campaign, managing a refugee camp or building local health capacity in a developing country. A master's degree in health, business administration or international development is almost always required, along with foreign language skills and some previous work experience. Nonprofits and other global health organizations are increasingly hiring developing country nationals instead of expats for program manager positions, although the availability of well-trained and experienced candidates varies greatly depending on the country.

Organizations such as Engender, Care International, Chemonics International Inc., International Medical Corps, WYG International and others are periodically seeking to hire program managers.

Job seekers who wish to design health programs may find a medical or nursing degree a good first step, but they must have some experience working on a global health issue or international development.

Program assistant or administrator

These positions support programs in the field with "back office" work such as accounting, budgeting, recruiting, and grant proposal writing. While program assistants handle tasks related to a particular project or program, administrators tend to be focused on an entire organization. The most program administrator vacancies can be found in the nonprofit sector.

Program assistants and administrators may not require an advanced degree.

Social marketer or health educator

These global health disciplines involve the promotion of healthy behaviors in a culturally appropriate way. Many techniques in [social marketing](#) have been adapted from the private sector. Health education may involve capacity building efforts and the design and supply of health products to underserved communities.

Some employers require a background in the commercial sector, especially in marketing or raising the awareness of public health issues. Experience in developing countries is often mandatory.

Organizations that work on social marketing and health education initiatives include the [Academy for Educational Development](#), BroadReach Healthcare, Population Services International and Futures Group International.

Policy analyst

For those with an interest in the "big picture" of improving global health or in helping countries to improve health care, a position as policy analyst may be a good fit. These are usually higher-level positions for candidates with more experience, but there are opportunities for more junior analysts to conduct research on policy issues. An MPH or higher degree is always a prerequisite.

Policy work is usually done at government agencies, think tanks or donors such as the World Bank, [Rand Corp.](#) or Center for Strategic and International Studies.

The global health profession is constantly evolving and, as its scope of work expands, new disciplines emerge. Such career tracks may involve work on the environment, water and sanitation, for instance.

Several Web sites offer job listings and useful information on global health careers. [Devex](#) provides jobs, business opportunities and news, as well as listings of [top global health organizations](#). The Global Health Council provides extensive information on global health issues and jobs. Humanitarian aid consortium InterAction offers a fee-based online jobs board that includes positions in the emergency health field.

[Oliver Subasinghe](#) is a Devex international development correspondent in Washington, D.C. He previously served as a microfinance fellow for Kiva.org in Kenya and Uganda. During his tenure, he worked with Kiva's field partners to improve their operations and governance. He holds a bachelor's degree from Eckerd College and a master's in business from the College of William & Mary's Mason School of Business.



General Description:

Acupuncturists can create financially supportive careers with flexible work schedules that provide an opportunity for a more balanced lifestyle for both the practitioner and patient. Patients are viewed from a holistic perspective, taking into account their physical, mental, and emotional health. Acupuncturists are able to spend time developing a collaborative relationship with patients, assisting them in maintaining their health and promoting a consciousness of wellness. The settings in which practitioners work vary from a multi-disciplinary clinic with other health care professionals, to a hospital, to a private practice. Other career options are also available.

What are some common daily activities/experiences?

Although acupuncturists encounter a wide range of chronic and acute issues, they bring to bear skills that include not only acupuncture, but also *tui na* manual therapy, including cupping and moxa heat therapy, herbal medicine, energetic exercises such as *tai qi* and *qi gong*, and food therapy, all based on the unified principles of Traditional Chinese Medicine or other traditions, such as Korean, Japanese, or Five Element practice.

What are 3-5 personal characteristics important for happiness and success in your profession?

A key trait the aspiring acupuncturist should have is patience, patience to watch the patient's health issues resolve naturally, slowly, and non-heroically, with emphasis on the body's natural ability, properly stimulated, to heal itself. Patience is also needed to grow an acupuncture practice slowly and surely, realizing that it may take longer than more conventional practices to hit full stride. Dedication is needed to learn continuously about a knowledge-based practice that is 5,000 years old, multi-cultural, and whose richness in applications and adaptations are still being discovered.

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

The ancient Chinese medical cannon, the *Nei Jing*, states that "the inferior physician treats, the superior physician teaches." Students preparing to become an acupuncturist should ask if they like to teach, and if they have, or can develop that ability. There are two reasons for this. First, most Americans have not had acupuncture, know very little about it, and will need to be informed so they can choose to experience this form of medicine. Second, once they make that choice, they will need to be further educated on how this medicine specifically applies to their condition, what to expect, and how active participation and partnership can accelerate their progress.

Preparing for Admission:

- **Prerequisite coursework:** Varies by college. The national accrediting agency (ACAOM) prescribes minimum requirements, which are specified in ACAOM's *Accreditation Manual* under Standard 6 (Admissions). (See page 16). ACAOM's basic prerequisite is satisfactory completion of at least two academic years (60 semester credits/90 quarter credits) of education at the baccalaureate level that is appropriate preparation for graduate level work, or the equivalent (e.g., certification in a medical profession requiring at least the equivalent training of a registered nurse or a physician assistant), from an institution accredited by an agency recognized by the U.S. Secretary of Education. A number of CCAOM schools, however, exceed this minimum by requiring a baccalaureate degree.

NAAHP Fact Sheet for Health Professions Advisors

Acupuncture and Oriental Medicine

- **Standardized Tests:** no information provided
- **Experience/Exposure:** no information provided
- **Letters of Recommendation:** no information provided
- **Resources for researching schools:** CCAOM Member College U.S. Map – <http://www.ccaom.org/membermap.asp>

The Admissions Cycle:

- CAS(es): Acupuncture programs do not use a common application; applications are submitted to schools directly.

The Admissions Process:

- Total number of students: 7,771

Learn More about the Profession

Training & Career Opportunities

- Number of years: 3 or 4
- Degree(s) attained: Master of Science in Acupuncture (3 yrs.) or Master of Science in Oriental Medicine (4 yrs.). Advanced training at doctoral level is available with the Doctor of Acupuncture and Oriental Medicine (DAOM) degree. A First-Professional Doctorate Degree is being piloted at some acupuncture colleges.
- Data on employment of recent graduates, if available: Solo practice is the norm, but other practice settings include integrative medical practices and facilities (including hospitals), teaching, translating, publishing, research, or working with an herb or acupuncture supply company.

Key Resources for Students

- <http://www.ccaom.org/faqs.asp> and “Featured AOM Graduates” on CCAOM homepage (www.ccaom.org).

Key Resources for Advisors

- <http://www.ccaom.org/careers.asp>
- “**Choose a Fulfilling Career in Acupuncture & Oriental Medicine**” (free). This tri-fold pamphlet contains information about career opportunities in the field of acupuncture and Oriental medicine and may be ordered through Council’s national office.
- “**CCAOM: Educational Excellence in Acupuncture & Oriental Medicine**” (free), provides information about CCAOM and its work in promoting educational excellence in acupuncture and Oriental medicine and may be ordered through Council’s national office.

Social Media: N/A at this time.

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.

NAAHP Fact Sheet for Health Professions Advisors
Acupuncture and Oriental Medicine

Advisory Council Professional Association Partner Information
Council of Colleges of Acupuncture and Oriental Medicine, www.ccaom.org

- **Mission**
The mission of CCAOM is to support member institutions to deliver educational excellence and quality patient care.
- **Size of organization, Number of member institutions**
CCAOM's national office has two full-time employees and one part-time employee. The membership consists of 56 AOM colleges and programs in 21 states (excluding branch campuses).
- **New institutional members in last two years**
Two new member colleges have joined CCAOM in the last two years:
 - Wongu University of Oriental Medicine (NV)
 - Golden State University (CA)

Advisory Council Contact Information

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Date updated: August 22, 2016



General Description:

Audiologists are licensed health-care professionals who provide patient-centered care in the prevention, identification, diagnosis, and evidence-based treatment of hearing, balance and other auditory disorders for people of all ages. Hearing and balance disorders are complex with medical, psychological, physical, social, educational, and employment implications. Treatment services require audiologists to have knowledge of existing and emerging technologies, as well as interpersonal skills to counsel and guide patients and their family members through the rehabilitative process. Audiologists provide professional and personalized services to minimize the negative impact of these disorders, leading to improved outcomes and quality of life.

Speech-language pathologists provide vital services across the lifespan to prevent, evaluate and treat disorders in speech, spoken and written language, social communication, cognition, voice, fluency, and swallowing. They work in healthcare, education, private practice, and community-based settings in collaboration with clients, families, and other professionals to improve the quality of life for children and adults with communication and swallowing disorders.

What are some common daily activities/experiences?

Common daily activities for **audiologists** include providing assessments, fitting and dispensing hearing technology, counseling, consulting and collaborating with others and preparing diagnostic and treatment reports. Some audiologists and hearing scientists also spend part of their day engaged in teaching, research or administration. [Learn more](#) about the profession of audiology.

(<http://www.asha.org/Students/Audiology/>)

Common daily activities for **speech-language pathologists** include providing screenings, assessments, treatment and counseling, consulting and collaborating with others and preparing diagnostic and treatment reports. Some speech-language pathologists and speech-language scientists also spend part of their day engaged in teaching, research or administration. [Learn more](#) about the profession of speech-language pathology. (<http://www.asha.org/Students/Speech-Language-Pathology/>)

What are 3-5 personal characteristics important for happiness and success in your profession?

Success in the professions of audiology and speech-language pathology requires:

- An interest in working with people to prevent or alleviate communication disorders
- The ability to care about, empathize and collaborate with others
- An inquisitive mind, and the ability to use state of the art science and technology in the context of evidence-based practice

What are 3-5 key questions students should be asking themselves as they prepare for your profession?

- What inspired you to consider a career in communication sciences and disorders? Perhaps a friend or loved one has a hearing, balance, communication or swallowing disorder or you are drawn to the science of the professions.
- What are your professional goals? There are many career options (clinician, educator, scientist, administrator) and work settings (health care, schools, private practice, research institutions) available in audiology, speech-language pathology, and the speech-language and hearing sciences so having a

NAAHP Fact Sheet for Health Professions Advisors

Audiology & Speech-Language Pathology

sense of one's personal and professional goals can impact where a student chooses to study and what degrees will be necessary.

Preparing for Admission:

- For academic preparation, see [Planning Your Education in Audiology and Speech-Language Pathology](#).
- The [Graduate Record Examination \(GRE\)](#) may be required for admission to graduate degree programs in audiology and speech-language pathology. Not all institutions require an examination for admission.
- Resources for researching schools: EdFind, an online search tool, identifies degree programs in Audiology and Speech-Language Pathology: <http://www.asha.org/edfind>

The Admissions Cycle:

- Applications can be submitted directly to institutions
- CAS: The Communication Sciences and Disorders Centralized Application Service (CSDCAS) is owned and administered by the Council of Academic Programs in Communication Sciences and Disorders (CAPCSD).
 - <http://www.capcsd.org/csdcas-student-page/>
 - Application opens: August 2
- CSDCAS [Facebook](#) Page: <http://www.facebook.com/CSDCASApp>
- CSDCAS [Twitter](#) Feed: <https://twitter.com/CSDCASApp>

The Admissions Process:

The below data on admissions and enrollment are from the Communication Sciences and Disorders (CSD) Education: 2014–2015 Academic Year conducted by the Council of Academic Programs in Communication Sciences and Disorders & American Speech-Language-Hearing Association. Retrieved from www.capcsd.org and www.asha.org.

Data was based on an overall response rate of 92% (287 of 312) of the institutions completing the CSD Education Survey. No extrapolation was conducted.

Applications Received (total number of applications across institutions; not number of individual applicants)

- 6,017 entry-level clinical doctoral in audiology
- 65,510 master's in speech-language pathology
- 162 post entry-level clinical doctoral in audiology
- 92 post entry-level clinical doctoral in speech-language pathology
- 612 research doctoral in audiology, speech-language pathology and/or speech and hearing sciences

Newly Enrolled:

- 784 newly enrolled students in entry-level clinical doctoral in audiology
- 8,063 newly enrolled students in master's in speech-language pathology

GPA Averages: applicants who were offered admission

- 3.25-3.97 GPA mean range of students offered admission to clinical entry-level doctoral in audiology
- 3.25-3.98 GPA mean range of students offered admission to Speech-Language Pathology Master's

Total Enrollment:

- 2,793 entry-level clinical doctoral in audiology

For more information on many health professions, we recommend the NAAHP publication, [Health Professions Admission Guide: Strategies for Success](#), available on the NAAHP website.

NAAHP Fact Sheet for Health Professions Advisors

Audiology & Speech-Language Pathology

- 16,731 master's in speech-language pathology

Learn More about the Profession

Training & Career Opportunities:

There are over 300 colleges and universities offering undergraduate and graduate CSD degree programs in the United States. Preparation to become an audiologist entails earning an entry-level clinical doctoral degree with a major emphasis in audiology [e.g., the Doctor of Audiology (Au.D.) degree]. The master's degree is required to practice as a speech-language pathologist. A PhD is most often required for faculty-researcher careers.

Audiology

- Number of years: The time-to-degree is 3 or 4 years of full time study.
- Degree attained: Doctor of Audiology (Au.D.)
- 2014-2015 AY: 623 clinical entry-level doctoral degrees in audiology were granted (CSD Education Survey)
- Healthcare setting (including private practice) is the primary first employment setting among recent audiology graduates

Speech-Language Pathology

- Number of years: The time-to-degree is 2 years of full time study.
- Degree attained: Master's degree
- 2014-2015 AY: 7,539 master's degrees in speech-language pathology were granted (CSD Education Survey)
- School setting (pre-K-12) is the primary first employment setting among recent graduates

Data on workforce supply and demand:

ASHA-Certified Audiologists

- 74% are employed in health care settings
- 30% are employed in full- or part-time private practice
- National ratio: 4.0 audiologists for every 100,000 residents
- Much faster than average growth through 2024:
 - 3,800 additional audiologist needed
 - 29% increase in job openings

ASHA-Certified SLPs

- 53% are employed in school settings
- 39% are employed in health care settings
- National ratio: 46.6 SLPs for every 100,000 residents
- Much faster than average growth through 2024
 - 28,900 additional speech-language pathologists needed
 - 21% increase in job openings

Key Resources for Students:

- ASHA information for prospective students: <http://www.asha.org/students/>
- Planning Your Education: <http://www.asha.org/Students/Planning-Your-Education-in-CSD/>
- EdFind (search for graduate programs): <http://www.asha.org/edfind/>

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.

NAAHP Fact Sheet for Health Professions Advisors

Audiology & Speech-Language Pathology

Key Resources for Advisors:

- **Audiology and Speech-Language Pathology Career Brochures**
[Click here](#) to order free copies of:
 - Make a Difference, Make a Change, general brochure
 - Make a Difference, Make a Change with a Career as a School-Based Speech-Language Pathologist
 - Make a Difference, Make a Change with a Career in Health Care
 - Make a Difference, Make a Change with a Career as a College Professor in Communication Sciences and Disorders

Advisory Council Professional Association Partner Information

The **American Speech-Language-Hearing Association (ASHA)** is the national professional, scientific, and credentialing association for 186,000 members and affiliates who are audiologists; speech-language pathologists; speech, language, and hearing scientists; audiology and speech-language pathology support personnel; and students.

ASHA Mission

Empowering and supporting audiologists, speech-language pathologists, and speech, language, and hearing scientists through:

- Advancing science
- Setting standards
- Fostering excellence in professional practice, and
- Advocating for members and those they serve

ASHA Vision

Making effective communication, a human right, accessible and achievable for all.

Size of organization, Number of member institutions: 186,000 members and affiliates

Advisory Council Contact Information

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Director of Academic Affairs & Research Education

lnunez@asha.org

301-296-5780

For academic advising inquiries, contact academicaffairs@asha.org

NAAHP liaison and contact information

Kristin McJunkins

Yale University

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Date updated: 8/30/2016

For more information on many health professions, we recommend the NAAHP publication, Health Professions Admission Guide: Strategies for Success, available on the NAAHP website.

AUDIOLOGY (Au.D.) & SPEECH LANGUAGE PATHOLOGY

ACADEMIC AND CAREER INFORMATION

NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Audiologists are licensed health-care professionals who provide patient-centered care in the prevention, identification, diagnosis, and evidence-based treatment of hearing, balance and other auditory disorders for people of all ages. Hearing and balance disorders are complex with medical, psychological, physical, social, educational, and employment implications. Treatment services require audiologists to have knowledge of existing and emerging technologies, as well as interpersonal skills to counsel and guide patients and their family members through the rehabilitative process. Audiologists provide professional and personalized services to minimize the negative impact of these disorders, leading to improved outcomes and quality of life.

Common daily activities for audiologists include providing assessments, fitting and dispensing hearing technology, counseling, consulting and collaborating with others and preparing diagnostic and treatment reports. Some audiologists and hearing scientists also spend part of their day engaged in teaching, research or administration. [Learn more about the profession of audiology.](#) 74% are employed in health care settings, 30% are employed in full- or part-time private practice.

Speech-language pathologists provide vital services across the lifespan to prevent, evaluate and treat disorders in speech, spoken and written language, social communication, cognition, voice, fluency, and swallowing. They work in healthcare, education, private practice, and community-based settings in collaboration with clients, families, and other professionals to improve the quality of life for children and adults with communication and swallowing disorders.

Common daily activities for speech-language pathologists include providing screenings, assessments, treatment and counseling, consulting and collaborating with others and preparing diagnostic and treatment reports. Some speech-language pathologists and speech-language scientists also spend part of their day engaged in teaching, research or administration. [Learn more about the profession of speech-language pathology.](#) 53% are employed in school settings, while 39% are employed in health care settings.

TRAINING

There are over 300 colleges and universities offering undergraduate and graduate Communication Science and Disorders (CSD) degree programs in the United States. Preparation to become an audiologist entails earning an entry-level clinical doctoral degree with a major emphasis in audiology [i.e. the Doctor of Audiology (Au.D.) degree]. A master's degree is required to practice as a speech-language pathologist. A PhD is most often required for faculty researcher careers.

Audiology: The time-to-degree is 3 or 4 years of full time study. Degree attained: Doctor of Audiology (Au.D.) 2014-2015 AY: 623 clinical entry-level doctoral degrees in audiology were granted (CSD Education Survey) A Healthcare setting is the primary first employment setting among recent audiology graduates.

Speech-Language Pathology: The time-to-degree is 2 years of full time study. Degree attained: Master’s degree. 2014-2015 AY: 7,539 master’s degrees in speech-language pathology were granted (CSD Education Survey). A school setting (pre-K-12) is the primary first employment setting among recent graduates.

ACADEMIC PREPARATION

Regardless of major or minor area of study, at least one course each in the human biological sciences, physical sciences, mathematics, statistics, social/behavioral sciences, and English are required as part of a student’s undergraduate degree or post-baccalaureate preparation. Courses in communication sciences and disorders relevant to the study of audiology are strongly encouraged.

COURSE REQUIREMENTS

CSULB courses which fulfill admission requirements for some U.S. programs:

Students maintain responsibility for verifying course selection with individual programs.

Coursework	CSULB Courses	Units
Human Anatomy and Physiology with Lab	Biology 208: Human Anatomy Biology 207: Human Physiology	4, 4
General Biology with Lab	Biology 211 & 212	4, 4
One year of General Physics with Lab	Physics 100A & 100B OR 151 & 152	4, 4
One course in Statistics	Biology 260 OR Kinesiology 483	3
One year of Behavioral Science courses	Sociology 100 and Psychology 100	3, 3
One year of English	English 100 AND another course from the English department such as: 102, 180, 300	3, 3

IMPORTANT FACTORS CONSIDERED FOR SUCCESSFUL APPLICANTS

Clinical exposure is essential. The program may specify the settings and types of experiences required. This experience may be an important factor in the admissions process. Students should respectfully contact clinics, hospitals, long-term care facilities (e.g., nursing homes), educational facility and other healthcare settings in the area to find observation opportunities.

Many programs require 1-4 letters of letters of recommendation as part of the admissions process. If references are required, select individuals who meet the program’s requirements; know the student well; and can speak to maturity, dependability, dedication, compassion, communication skills, leadership, and any hands on experience in the field.

The [Graduate Record Examination \(GRE\)](#) may be required for admission to graduate degree programs in audiology and speech-language pathology. Not all institutions require an examination for admission.

All prerequisite courses must be completed by time of matriculation. Applications can be submitted directly to institutions. The Communication Sciences and Disorders Centralized Application Service (CSDCAS) is another option for applying to many programs in one place.

ADDITIONAL RESOURCES

- [ASHA information for prospective students](#)
- [EdFind](#) (search for graduate programs)
- [Communication Sciences and Disorders Centralized Application Service \(CSDCAS\)](#)

For more information on Audiology and Speech Pathology, visit www.asha.org and see your HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events.



How to Become a Nutritionist/Dietitian



Job Description

Nutritionists and Dietitians create food plans and nutrition programs, and they oversee meal preparation as well as the serving of meals. They treat illnesses by promoting healthy eating habits and suggest ways to modify a diet for a healthy lifestyle. Some specialize and become a sports nutritionist, clinical dietitian, public health nutritionist, management dietitians or consultant.

Work Environment

Nutritionists work indoors near kitchens and food preparation areas. Some may manage food service systems for hospitals, nursing care facilities, schools, and other institutions. Some work weekends and holidays while others work early morning or late evening shifts. Nutritionists work in close contact with patients who may be demanding, critically ill and terminal, or have mental health issues. Computer knowledge is required for tasks such as planning menus, creating special recipes, tracking progress, maintaining inventory, and billing clients if working in private practice or consulting.

Career Outlook

The California job outlook for Nutritionists over the next decade is excellent, and the field is expected to grow on average of 9.6% - 19.6% over the next 5 years. The Bureau of Labor Statistics also expects an average national growth rate of 7.4% - 13.3% with 62,038 jobs available throughout the U.S by 2016.

Factors that affect demand are population growth, aging, and increasing concern about health and diet. Career demand is expected to be good in hospitals, nursing home facilities, community health programs, nutrition research, and with government food service control programs. In private industry, jobs are expected to increase in catering, restaurants, medical supply, and employer-sponsored fitness programs.

Income

Income varies depending on location and the size and type of the employer. In the U.S., a Nutritionist's salary ranges from entry-level (\$4,000/month) to experienced (\$6,000/month).

Education Requirements

Bachelor's Degree and Master's Degree programs in Nutritional Science are designed to prepare students to work in professional dietetic careers. Students study the physiological and biochemical principles underlying human nutrition and the dietary changes and metabolic understanding of the disease process.

Relevant undergraduate courses include Biochemistry, Chemistry, Microbiology, Physiology, Diet Therapy, Food Quality, Human Nutrition, Nutrition and Disease, Personnel

How to Become a Nutritionist/Dietitian

Management, Purchasing and Preparation, Special Dietary Needs of the Young, Elderly, and Ill, Business, Math, Statistics, Computer Science, and Psychology. Professional programs provide specializations in areas such as administration, education, research, and clinical and community dietetics. Also, a professional Dietetic program's admission may be limited to students who have successfully completed lower division courses in food and nutrition. Once accepted in a program, students attend lectures on menu planning, meal preparation, and food nutrition. Dietetic programs must be approved by the American Dietetics Association's Commission on Accreditation for Dietetics Education to qualify for internships or certification as a Registered Dietitian.

Bachelor degree programs in dietetics or nutrition, which include an internship program, prepare graduates for membership into the American Dietetic Association (ADA). Dietitian programs are often designed to provide coursework requirements for admission into a six-month to twelve-month internship program after completing the required coursework for the Bachelor's degree.

California Masters Programs:

University of Southern California

Master of Science in Nutrition, Healthspan, and Longevity

California State University, Chico

California State University, Long Beach

California State University, Northridge

California Polytechnic State University

Loma Linda University: School of Public Health

Loma Linda University: Dept of Nutrition

Pepperdine University

San Diego State University

San Jose State University

University of California at Berkeley: Graduate Program in Nutrition

University of California at Berkeley: Public Health Nutrition

University of California, Davis

How to Become a Nutritionist/Dietitian

Licensing & Certification

Licensure, certification and registration requirements vary by state. Licensing is not required in California. However, job applicants with specialized training, an advanced degree, and certification beyond the state's minimum requirements will find the best job opportunities.

Voluntary certification is available from:
The American Dietetic Association (ADA)
120 S. Riverside Plaza, Suite 2000
Chicago, IL 60606-6995
www.eatright.org
membership@eatright.org
800-877-1600

The Commission on Dietetic Registration of the American Dietetic Association provides the Registered Dietitian credential to individuals who pass an exam after completing academic coursework and a supervised internship. To maintain the status as a Registered Dietitian, professionals must complete a minimum of 75 credit hours in approved continuing education classes every 5 years.

Special Consideration

Nutritionists may work in kitchens that are hot and steamy, and they may be on their feet for most of the day. They may also work in close contact with patients who are demanding, critically ill or terminal. If working as a consultant or in private practice, a professional will need skills and knowledge to build a business.

Sources of Additional Information

American Dietetic Association (ADA)
www.eatright.org
800-877-1600

American Health Care Association (AHCA)
www.ahca.org
202-842-4444

Association of Schools of Allied Health Professions (ASAHP)
www.aahp.org
202-293-4848

School Nutrition Association (SNA)
www.schoolnutrition.org
703-739-3900



Health Professions Resources

Advising Undocumented Pre-Health Students

Created by:

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Assistant Director, Academic & Career Advising
Keck School of Medicine of USC



I. Defining DACA and Undocumented

- A. Undocumented: not U.S. citizens, U.S. nationals, or “eligible noncitizens”
 - 1. Not the same as an international student
- B. DACA: has received deferred action under the Deferred Action for Childhood Arrivals
 - 1. Eligible for work authorization and SSN
- C. Undocumented and DACAmented individuals represent many races and ethnicities

II. Key Issues & Best Practices

- A. **DACA Fees**
 - 1. Can be prohibitive
 - 2. Individuals may not be eligible or may not want to apply
- B. **Admissions**
 - 1. Identifying on the CAS/application
 - 2. DACA and undocumented friendly schools
 - a) <https://www.pomona.edu/administration/pre-health/explore/undocumented-and-dacammented-student-resources/medical-schools-open-undocumented-and-daca-applicants>
- C. **Financial Aid**
 - 1. Not eligible for federal aid; may be eligible for state or some financial aid
 - a) In-state tuition map
 - (1) http://unitedwedream.org/wp-content/uploads/2014/05/DEEP_TuitionAidMap_June2015.pdf
 - 2. Can file FAFSA
 - a) For CA, also need to file DREAM application
 - 3. Financial Aid and Undocumented Students FAQ
 - a) <https://studentaid.ed.gov/sa/sites/default/files/financial-aid-and-undocumented-students.pdf>
- D. **Internships**
 - 1. DACA eligible if they receive work authorization; otherwise look into institutional or outside aid to support intern or volunteer opportunities
- E. **Testing**
 - 1. For MCAT can contact AAMC for a Proxy ID if do not have SSN; ID presented must have been issued by a government agency
- F. **Political Climate**
 - 1. Policies can change at any time
<https://www.uscis.gov/archive/consideration-deferred-action-childhood-arrivals-daca>
 - 2. Students may be supporting or concerned about family members

G. Disclosure

1. You may not know a student's status - do not ask

H. Residency/Employment

1. Ability to secure employment following graduate program
2. Pre-Health Dreamers (PHD) Residency Program Guide for DACA
 - a) <http://www.phdreamers.org/resources/residency-program-guide-to-considering-candidates-with-daca/>
3. PHD Residency Program Guide for undocumented
 - a) <http://www.phdreamers.org/resources/residence-for-undocumented-medical-students/>
4. PHD Career Pathway Chart
 - a) <http://www.phdreamers.org/resources/pathways-chart/>

I. Giving Support

1. Awareness, sensitivity, and resourcefulness
2. Top 10 Ways to Support Undocumented Students
 - a) http://www.e4fc.org/images/E4FC_EducatorTop10.pdf
3. PHD Medical School FAQ
 - b) <http://www.phdreamers.org/wp-content/uploads/2013/05/PHD-MedSchoolFAQ-ver.2.pdf>

III. Resources

A. Pomona College Pre-Health Advising: Undocumented & DACAdmented Student Resources

<https://www.pomona.edu/administration/pre-health/explore/undocumented-and-dacamented-student-resources>

B. United We Dream

<http://unitedwedream.org/>

C. Dream Educational Empowerment Program (DEEP)

<https://unitedwedream.org/about/projects/education-deep/>

D. Pre-Health Dreamers

<http://www.phdreamers.org/>

E. Act on a Dream

<http://www.actonadream.org/resources/medical-school/>

F. Educators for Fair Consideration

<http://e4fc.org/>

G. U.S. Dept. of Education Resource List

<https://www.pomona.edu/sites/default/files/u.s-dept.-of-education-resource-list.pdf>

H. My Undocumented Life

<https://www.mydocumentedlife.org/>

J. MiMentor

<https://www.mimmentor.org>

Medical School Admission Requirements (MSAR) Advisor Report

Deferred Action for Childhood Arrivals (DACA)

2020

USA

State	Medical School Name	Accepts DACA	DACA Details
AL	University of Alabama School of Medicine		
AL	University of South Alabama College of Medicine		We do not accept DACA applicants
AR	University of Arkansas for Medical Sciences College of Medicine		
AZ	University of Arizona College of Medicine		
AZ	University of Arizona College of Medicine - Phoenix		
CA	California Northstate University College of Medicine		* MCAT score must be submitted before an invitation for an interview can be extended.
CA	California University of Science and Medicine-School of Medicine		DACA applicants are welcome to apply
CA	Kaiser Permanente School of Medicine		Deferred Action for Childhood Arrivals (DACA) status are eligible to apply to the School.
CA	Keck School of Medicine of the University of Southern California		All applicants
CA	Loma Linda University School of Medicine		Preference for admission is given to qualified members of the Seventh-day Adventist Church.
CA	Stanford University School of Medicine		http://med.stanford.edu/md-admissions/how-to-apply/international-students.html
CA	University of California, Davis, School of Medicine		Not Available
CA	University of California, Irvine, School of Medicine		Must submit DACA documentation
CA	University of California, Los Angeles David Geffen School of Medicine		The David Geffen School of Medicine at UCLA will consider all eligible applicants, including those with DACA status, even if the applicant's DACA or work authorization expires.
CA	University of California, Riverside School of Medicine		The California Dream Act passed in 2011 gives undocumented DACA (AB540 eligibility students) access to state financial aid and institutional and privately-funded scholarships
CA	University of California, San Diego School of Medicine		http://meded.ucsd.edu/index.cfm/asa/admissions/application_process/
CA	University of California, San Francisco, School of Medicine		Yes, all applicants
CO	University of Colorado School of Medicine		CUSOM accepts DACA applicants.
CT	Frank H. Netter MD School of Medicine at Quinnipiac University		DACA applicants should contact the Office of Medical School Admissions (medicine@qu.edu)
CT	University of Connecticut School of Medicine		All applicants
CT	Yale School of Medicine		Accepted DACA status applicants receive need-based financial aid from Yale School of Medicine.
DC	Georgetown University School of Medicine		We accept DACA students
DC	George Washington University School of Medicine and Health Sciences		
DC	Howard University College of Medicine		We evaluate DACA applicants on a limited basis.
FL	Charles E. Schmidt College of Medicine at Florida Atlantic University		DACA not accepted
FL	Florida International University Herbert Wertheim College of Medicine		Only U.S. Citizens and U.S. Permanent Residents will be considered.

USA

State	Medical School Name	Accepts DACA	DACA Details
FL	Florida State University College of Medicine		As DACA applicants are not eligible for Federal Financial Aid, these applicants must be able to provide financial information showing the ability to pay for the entire medical school education.
FL	Nova Southeastern University Dr. Kiran C. Patel College of Allopathic Medicine		
FL	University of Central Florida College of Medicine		
FL	University of Florida College of Medicine		
FL	University of Miami Leonard M. Miller School of Medicine		DACA applicants are encouraged to apply and will be assisted through the Office of Diversity and Inclusion.
FL	USF Health Morsani College of Medicine		Case by Case
GA	Emory University School of Medicine		Applicants with DACA status will be considered for admission, with no difference in requirements. Some need-based funds may be available.
GA	Medical College of Georgia at Augusta University		
GA	Mercer University School of Medicine		
GA	Morehouse School of Medicine		
HI	University of Hawaii, John A. Burns School of Medicine		See JABSOM admissions webpages for more details.
IA	University of Iowa Roy J. and Lucille A. Carver College of Medicine		
IL	Carle Illinois College of Medicine		
IL	Chicago Medical School at Rosalind Franklin University of Medicine & Science		Must have DACA Status at the time of application to be considered.
IL	Loyola University Chicago Stritch School of Medicine		http://ssom.luc.edu/daca/
IL	Northwestern University The Feinberg School of Medicine		Students with DACA status are ineligible for most federal assistance programs, and thus must secure private funding through a participating lender with a US-based co-signer.
IL	Rush Medical College of Rush University Medical Center		Rush Medical College welcomes applicants regardless of documented or undocumented immigration status.
IL	Southern Illinois University School of Medicine		
IL	University of Chicago Division of the Biological Sciences The Pritzker School of Medicine		We accept applications from DACA applicants.
IL	University of Illinois College of Medicine		
IN	Indiana University School of Medicine		
KS	University of Kansas School of Medicine		Not applicable
KY	University of Kentucky College of Medicine		Applicants with DACA status who attended a Kentucky undergraduate school or are Kentucky residents may be considered for admission but are not eligible for federal loans or institutional scholarship.
KY	University of Louisville School of Medicine		http://louisville.edu/medicine/admissions/policies/residency-requirements
LA	Louisiana State University School of Medicine in New Orleans		
LA	Louisiana State University School of Medicine in Shreveport		

USA

State	Medical School Name	Accepts DACA	DACA Details
LA	Tulane University School of Medicine		The admissions process is identical for domestic and international students. All applicants will receive a full review of their file, regardless of citizenship or immigration status.
MA	Boston University School of Medicine		BUSM has extremely limited financial resources for DACA status students.
MA	Harvard Medical School		Please see our website for more information.
MA	Tufts University School of Medicine		https://medicine.tufts.edu/admissions-aid/info-for/daca-applicants
MA	University of Massachusetts Medical School		Applicants must provide proof of DACA status.
MD	Johns Hopkins University School of Medicine		Yes: All applicants
MD	Uniformed Services University of the Health Sciences F. Edward Hebert School of Medicine		We do not accept DACA students.
MD	University of Maryland School of Medicine		
MI	Central Michigan University College of Medicine		
MI	Michigan State University College of Human Medicine		Preference given to DACA in-state residents.
MI	Oakland University William Beaumont School of Medicine		Only U.S. citizens and permanent residents are eligible for admission.
MI	University of Michigan Medical School		https://medicine.umich.edu/medschool/education/md-program/md-admissions/requirements
MI	Wayne State University School of Medicine		
MI	Western Michigan University Homer Stryker M.D. School of Medicine		
MN	Mayo Clinic School of Medicine		DACA applicants will be considered on a case-by-case basis.
MN	University of Minnesota Medical School		Please contact the Office of Admissions if you are a Minnesota resident with DACA designation.
MO	Saint Louis University School of Medicine		DACA applicants are considered international students and are subject to additional financial requirements.
MO	University of Missouri-Columbia School of Medicine		
MO	University of Missouri-Kansas City School of Medicine		
MO	Washington University in St. Louis School of Medicine		Applications are considered regardless of country of citizenship.
MS	University of Mississippi School of Medicine		
NC	Duke University School of Medicine		We consider DACA Status Applicants
NC	The Brody School of Medicine at East Carolina University		
NC	University of North Carolina at Chapel Hill School of Medicine		Yes. Considered part of the out-of-state applicant pool. GPA and MCAT criteria can be found at: https://www.med.unc.edu/admit/requirements/admissions-process/
NC	Wake Forest School of Medicine of Wake Forest Baptist Medical Center		
ND	University of North Dakota School of Medicine and Health Sciences		
NE	Creighton University School of Medicine		
NE	University of Nebraska College of Medicine		

USA

State	Medical School Name	Accepts DACA	DACA Details
NH	Geisel School of Medicine at Dartmouth		DACA students are eligible to apply and are considered in the same pool as US citizens.
NJ	Cooper Medical School of Rowan University		
NJ	Rutgers New Jersey Medical School		DACA applicants are encouraged to apply.
NJ	Rutgers, Robert Wood Johnson Medical School		DACA applicants will be screened the same as other applicants. We do not have school sponsored loans available for students.
NJ	Seton Hall - Hackensack Meridian School of Medicine		.
NM	University of New Mexico School of Medicine		DACA status applicants must meet one of our strong-ties to the state to gain consideration for admissions.
NV	University of Nevada Las Vegas, School of Medicine		DACA applicants will be reviewed on a case by case basis
NV	University of Nevada, Reno School of Medicine		The School of Medicine welcomes DACA applicants.
NY	Albany Medical College		
NY	Albert Einstein College of Medicine		Applicants are ineligible if they have completed 2 prior applications
NY	Columbia University Vagelos College of Physicians and Surgeons		N/A
NY	CUNY School of Medicine		Same as in-state
NY	Donald and Barbara Zucker School of Medicine at Hofstra/Northwell		We accept applications from those who hold DACA status
NY	Icahn School of Medicine at Mount Sinai		http://icahn.mssm.edu/education/financial-aid/application/daca
NY	Jacobs School of Medicine and Biomedical Sciences at the University at Buffalo		Financial Aid may not be available for accepted DACA applicants.
NY	New York Medical College		NYMC is unable to provide scholarship funding or financial aid for DACA applicants.
NY	New York University Long Island School of Medicine		Not Available
NY	New York University School of Medicine		DACA applicants may apply.
NY	State University of New York Downstate Medical Center College of Medicine		Admissions preference is given to US citizens and permanent residents.
NY	State University of New York Upstate Medical University		http://www.upstate.edu/com/admissions/index.php
NY	Stony Brook University School of Medicine		Applications are accepted from DACA applicants.
NY	University of Rochester School of Medicine and Dentistry		Students with a DACA status are not eligible to apply.
NY	Weill Cornell Medicine		All applicants
OH	Case Western Reserve University School of Medicine		There is no difference in our admissions process for DACA applicants. The College Program will not be accepting applications from DACA applicants.
OH	Northeast Ohio Medical University		
OH	Ohio State University College of Medicine		Case by Case basis
OH	The University of Toledo College of Medicine		US permanent residents with a valid Green Card are considered. Permanent Residency approval must be granted before the AMCAS application can be considered.



USA

State	Medical School Name	Accepts DACA	DACA Details
OH	University of Cincinnati College of Medicine		
OH	Wright State University Boonshoft School of Medicine		
OK	University of Oklahoma College of Medicine		
OR	Oregon Health & Science University School of Medicine		DACA status considered for MD program, not considered for combined degree programs.
PA	Drexel University College of Medicine		
PA	Geisinger Commonwealth School of Medicine		
PA	Lewis Katz School of Medicine at Temple University		n/a
PA	Pennsylvania State University College of Medicine		all applicants
PA	Perelman School of Medicine at the University of Pennsylvania		limited funding for non US citizens
PA	Sidney Kimmel Medical College at Thomas Jefferson University		Must have earned a baccalaureate degree from a US or Canadian university
PA	University of Pittsburgh School of Medicine		Students with DACA status are considered an International applicant and have the escrow requirement.
PR	Ponce Health Sciences University School of Medicine		
PR	San Juan Bautista School of Medicine		They must meet the same admission requirements as international applicants
PR	Universidad Central del Caribe School of Medicine		
PR	University of Puerto Rico School of Medicine		
RI	The Warren Alpert Medical School of Brown University		All applicants
SC	Medical University of South Carolina College of Medicine		The MUSC College of Medicine does not accept DACA applicants
SC	University of South Carolina School of Medicine		
SC	University of South Carolina School of Medicine Greenville		
SD	University of South Dakota, Sanford School of Medicine		
TN	East Tennessee State University James H. Quillen College of Medicine		
TN	Meharry Medical College		N/A
TN	University of Tennessee Health Science Center College of Medicine		
TN	Vanderbilt University School of Medicine		There is no difference with our admissions process for DACA applicants.
TX	Baylor College of Medicine		At this time, Baylor College of Medicine does not accept DACA students.
TX	McGovern Medical School at the University of Texas Health Science Center at Houston		
TX	TCU and UNTHSC School of Medicine		
TX	Texas A&M Health Science Center College of Medicine		
TX	Texas Tech University Health Sciences Center Paul L. Foster School of Medicine		
TX	Texas Tech University Health Sciences Center School of Medicine		We do not accept DACA students.
TX	University of Texas at Austin Dell Medical School		
TX	University of Texas Medical Branch School of Medicine		
TX	University of Texas Rio Grande Valley School of Medicine		
TX	University of Texas School of Medicine at San Antonio		

USA

State	Medical School Name	Accepts DACA	DACA Details
TX	University of Texas Southwestern Medical Center Southwestern Medical School		
UT	University of Utah School of Medicine		https://medicine.utah.edu/students/programs/md/admissions/where-to-begin.php
VA	Eastern Virginia Medical School		
VA	University of Virginia School of Medicine		We accept DACA status applicants
VA	Virginia Commonwealth University School of Medicine		
VA	Virginia Tech Carilion School of Medicine		
VT	University of Vermont College of Medicine		Students are responsible for finding funding sources. Only partial scholarships available.
WA	University of Washington School of Medicine		WWAMI DACA students are considered if they are verified in their state as eligible for WWAMI funding.
WA	Washington State University Elson S. Floyd College of Medicine		We do not accept DACA applicants
WI	Medical College of Wisconsin		All applicants; must meet eligibility requirements.
WI	University of Wisconsin School of Medicine and Public Health		
WV	Marshall University Joan C. Edwards School of Medicine		
WV	West Virginia University School of Medicine		All applicants

CAN

State	Medical School Name	Accepts DACA	DACA Details
AB	University of Alberta Faculty of Medicine and Dentistry		
AB	University of Calgary Cumming School of Medicine		
BC	University of British Columbia Faculty of Medicine		
MB	Max Rady College of Medicine, Rady Faculty of Health Sciences, University of Manitoba		
NL	Memorial University of Newfoundland Faculty of Medicine		
NS	Dalhousie University Faculty of Medicine		
ON	McMaster University Michael G. DeGroote School of Medicine		
ON	Northern Ontario School of Medicine		
ON	Queen's University Faculty of Health Sciences		
ON	The University of Western Ontario - Schulich School of Medicine & Dentistry		
ON	University of Ottawa Faculty of Medicine		
ON	University of Toronto Faculty of Medicine		
QC	Faculty of Medicine Université Laval		
QC	McGill University Faculty of Medicine		
QC	Université de Montréal Faculty of Medicine		
QC	Université de Sherbrooke Faculty of Medicine		
SK	University of Saskatchewan College of Medicine		

Financial Aid Options for Undocumented Graduate Students in California

1. **Private loans** -Students have been able to successfully take out private loans, however, most banks will require a citizen or permanent resident individual to co-sign the loan. It's been tough for students to find someone to co-sign loans because the sum is so large for an individual to take the responsibility in case the student defaults on the loan.

Below are the banks we know have given loans to undocumented students

- Sallie Mae
- Discover Bank

2. **Scholarships/Fellowships:** There are some many scholarships available to graduate undocumented students. Denisse Rojas co-authored a guide for Educators for Fair Consideration, a non-profit in San Francisco that holistically supports undocumented students:

www.e4fc.org/resources/scholarshiplist.html

The guide contains a lengthy list of scholarships and fellowships open to undocumented graduate students. The list includes scholarships/fellowships for students generally attending graduate school (including professional schools) and then the list is divided by field of study.

Two great scholarships/fellowships open to Deferred Action for Childhood Arrivals (DACA) recipients is:

Paul & Daisy Soros Fellowship (www.pdsoros.org; open to students pursuing any graduate degree and will finance in full two years of graduate study)
Usually due Nov. 1

Ford Foundation Diversity Fellowship Programs
(<http://sites.nationalacademies.org/pga/fordfellowships>; various fellowships for individuals pursuing graduate study)
Deadlines vary, mid-November

3. **Individual fundraising:** A popular crowd funding website has been gofundme.com

4. **Loan Repayment Program:** The Health Professions Education Foundation, a statewide foundation, has a loan repayment programs for health professionals (www.oshpd.ca.gov/HPEF/applications.html) and is open to DACA recipients. The program repays your commercial or government loans (from \$4,000 to \$105,000) in exchange for services in a medically underserved area in California.

Eligible professions include: various allied health professions, Licensed Vocational Nurse, Bachelor's of Science Nursing, Nurse Practitioners, Dentists, Dental Hygienists, Certified Nurse Midwives, Physician Assistants, and Physicians.

Example program for Physicians:

[Steven M. Thompson Physician Corps Loan Repayment](http://www.oshpd.ca.gov/HPEF/STLRP.html)

[\(www.oshpd.ca.gov/HPEF/STLRP.html\)](http://www.oshpd.ca.gov/HPEF/STLRP.html): is open to DACA recipients. It will repay up to \$105,000 in educational loans (commercial or government loans) in exchange for three years of services in a medically underserved area in California. Open to Osteopathic and Allopathic physicians.

5. Institutional Loans: Some schools have institutional loans they award students. For example, UCSF has created a small loan for their first undocumented medical student; they expressed this was an option for other UC medical schools.

6. Institutional Scholarships: Some UC schools have generous scholarships open to undocumented students, and others do not. It varies greatly school by school. For school-specific scholarships, please see the list of fellowships in the E4FC Graduate Guide above!

7. CA Dream Act: Individuals applying to public schools in California must fill out the California Dream Act (<https://dream.csac.ca.gov>) the year they intend to matriculate in a graduate program. This will allow schools to evaluate prospective students' financial need since individuals are not eligible to fill out FAFSA. The California Dream Act also allows public schools to provide private funding through scholarships/grants to students; however, the amount varies greatly by school.

8. Dream Loan Program (SB1210): A new state bill was recently signed into law 9/28/2014 by Governor Brown that establishes a state loan program for eligible undocumented students. However, this program is NOT open to graduate students in case you receive inquiries about this! The program allows students to take loans in the amount of \$4,000/semester of no more that \$20,000 in total.

Funding Opportunities Available to AB 540 Students

General Scholarships & Fellowships Not Specific to Field of Study

Point Foundation: College Scholarships for LGBT Students

www.pointfoundation.org/point-apply/apply-now/

CSU Chancellor's Doctoral Incentive Program

<http://www.calstate.edu/hr/cdip/apply/>

Educators for Fair Consideration (E4FC) New American Scholars Program

<http://e4fc.org/scholarsprogram.html>

California Strawberry Scholarships

www.californiastrawberries.com/scholarships

Student Advocates for Higher Education (SAHE)

<http://www.sahesjsu.org/scholarship/>

Bay Area Gardener's Foundation

<http://www.bagsf.org/>

Davis-Putter Scholarship Fund

<http://www.davisputter.org/>

Congressional Hispanic Caucus Institute

<http://www.chci.org>

Manos de Esperanza (Hands of Hope)

www.manosdeesperanza.org/

MALDEF's DREAM Act Student Activist Scholarship

<http://www.maldef.org/leadership/scholarships/>

Atlas Shrugged Essay Contest

<http://essaycontest.aynrandnovels.com/AtlasShrugged.aspx?theme=blue>

Adsum Education Foundation Scholarship

<http://www.adsumsb.org/application.html>

Ford Foundation Postdoctoral Fellowship Program

<http://sites.nationalacademies.org/PGA/FordFellowships/index.htm>

Ford Foundation Predoctoral Fellowship Program

<http://sites.nationalacademies.org/PGA/FordFellowships/index.htm>

Hispanic Scholarship Fund-General College Scholarships

<http://hsf.net/en/scholarships/programs/general-college-scholarships>

CustomMade Scholarship

<http://www.custommade.com/scholarships/>

Field of Study-Specific Scholarships & Fellowships

BUSINESS

David C. Lizárraga Fellowship

<http://telacu.com/telacu-education-foundation/graduate-school-support/david-c-lizarraga-fellowship/>

Denny's Hungry for Education Scholarship

<http://www.hacu.net/hacu/scholarships.asp>

HUMANITIES, ARTS, AND SOCIAL SCIENCES

Hayek Fund- Career Development Grants

<http://www.theihs.org/hayek-fund>

Hispanic Community Affairs Council Scholarship Fund

<http://hcac-ac.org/index.php/scholarship>

Humane Studies Fellowship

<http://www.theihs.org/humane-studies-fellowships>

DPDF Student Fellowship Competition

<http://www.ssrc.org/fellowships/dpdf-fellowship/#eligibility>

Jack Kent Cooke Foundation Fellowship Award

<http://www.jkcf.org/scholarships/graduate-scholarships/jack-kent-cooke-dissertation-fellowship-award/>

La Unidad Latina Foundation Scholarship

<http://www.lulfoundation.org>

NASW Foundation Awards

<http://www.naswfoundation.org/gosnell.asp>

CCNMA: Latino Journalists of California Scholarship

<http://www.ccnma.org/>

Asian American Journalists Association

<http://www.aajasf.org/scholarship/>

Byron Hanke Fellowship

<http://www.cairf.org/scholarships/hanke.aspx>

Phi Delta Kappa International Graduate Fellowships

<http://pdkintl.org/programs-resources/scholarships-awards/graduate-fellowships/>

Jack Kent Cooke Foundation Graduate Arts Award

<http://www.jkcf.org/scholarships/graduate-scholarships/graduate-arts-award/>

Kate Neal Memorial Fellowship
<https://faa.illinois.edu/alumni-friends/kate-neal-kinley-memorial-fellowship>

**SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH
(INCLUDES HEALTH AND MEDICINE)**

LMSA-National Scholarship for U.S. Medical Students -
-MED
<http://lmsa.net/resources/scholarships>

Oliver Goldsmith, M.D. Scholarship MED
<http://community.kp.org/be-informed/program/oliver-goldsmith-scholarship-program>

eQuality Scholarship Collaborative MED
<http://www.equalityscholarship.org>

David C. Lizárraga Fellowship ENGINEER
<http://telacu.com/telacu-education-foundation/graduate-school-support/david-c-lizarraga-fellowship/>

The Pisacano Scholars Leadership Program MED
<http://www.pisacano.org>

CANFIT Scholarship HEALTH/NUTRITION/etc
<http://canfit.org/scholarships/>

Chinese Medical Society Scholarships MED
<http://chineseamericanmedicalsociety.cloverpad.org/Default.aspx?pageId=1070535>

Great Minds in Stem Henaac Awards GENERAL
<http://www.greatmindsinstem.org/college/henaac-scholarship-application-guidelines>

SHPE Foundation Scholarship Program
<http://scholarships.shpe.org/>

Jane Delano Student Nurse Scholarship
<http://www.redcross.org/support/get-involved/scholarships>

Fresno County Medical Society Scholarship Foundation
<http://www.fmms.org/Programs/AffiliatedOrganizations/ScholarshipFoundation.aspx>

Tylenol Future Care Scholarship
<https://www.tylenol.com/news/scholarship>

SALEF Health Careers Scholarships
http://www.salef.org/#!_awards-and-scholarship-banquet

Sierra Sacramento Valley Medical Society
<http://www.ssvms.org/Programs/MedicalStudentScholarshipFund.aspx>

Stan Beck Fellowship
<http://www.entsoc.org/about/awards-honors>

Amelia Earhart Fellowship
<http://www.zonta.org/WhatWeDo/InternationalPrograms/AmeliaEarhartFellowship.aspx>

LAW

Donald W. Banner Diversity Scholarship for Law Students
<https://bannerwitcoff.com/about-us/faq/>

Raza Lawyers Association- Central Valley Chapter Hon. Mario G. Olmos Memorial Scholarship Application
<http://larazalaw.com/events/banquet.html>

Japanese American Bar Association Educational Foundation Scholarship Association
<http://www.jabaonline.org/scholarships/>

MALDEF Law School Scholarship Program
<http://maldef.org/leadership/scholarships/index.html>

Humane Studies Fellowship
<http://www.theihs.org/humane-studies-fellowships>

Maggio Immigrants' Rights Fellowship
<http://www.maggiofellowship.org/application.html>

Virginia S. Mueller Scholarship
<http://womenlawyers-sacramento.org/scholarships/>

Fredrikson & Byron Foundation Minority Scholarship Program
<https://www.fredlaw.com/>

DRI Law Student Diversity Scholarship
<https://www.dri.org/About>

Dominican Bar Association Scholarship
<http://www.dominicanbarassociation.org/>

Byron Hanke Fellowship
<http://www.cairf.org/scholarships/hanke.aspx>

California Bar Foundation—Diversity Scholarship
<http://www.calbarfoundation.org/11-diversity-scholarship.html>

Latham & Watkins-Diversity Scholars Program
<http://www.lw.com/AboutUs/Diversity>

Women Lawyers of Sacramento: WLS Scholarship
<http://womenlawyers-sacramento.org/scholarships/>

Wallace (Wally) R. David Memorial Scholarship Fund
<http://www.ochba.org/scholarships>

American Bar Association
http://www.americanbar.org/groups/young_lawyers/awards_scholarships/haiku_contest_for_law_students.html

The Richard Linn American Inn of Court Mark T. Banner Scholarship
<http://www.linninn.org/Pages/scholarship.shtml>

School-Specific Scholarships & Fellowships

CALIFORNIA STATE UNIVERSITIES

Graduate Equity Fellowship
http://www.sjsu.edu/gradstudies/student_funding/graduate_equity_fellowship/index.html

CIRM Bridges to Stem Cell Research Awards
<http://biology.sfsu.edu/faculty-pages/cirm-bridges-stem-cell-research-awards>

UNIVERSITY OF CALIFORNIA SCHOOLS

UC Mexus-CONACYT Doctoral Fellowship for Mexican Nationals
http://ucmexus.ucr.edu/funding/prospective-fellows-info/doctoral_prospective.html

UC BERKELEY:

Albert Newman Fellowship for Visually Impaired Students
<http://grad.berkeley.edu/news/funding/newman-fellowship/>

Bancroft Library Studies Award
<http://www.lib.berkeley.edu/libraries/bancroft-library/fellowships-and-awards>

Bay Area Water Quality Fellowship
<http://grad.berkeley.edu/news/funding/water-quality-fellowship/>

Mellon/ACLS Dissertation Completion Fellowships
<https://www.acls.org/programs/dcf/>

UC DAVIS:

Townsend Dissertation Fellowships
<http://townsendcenter.berkeley.edu/funding/townsend-dissertation-fellowships>

UC Davis Travel Awards
<http://gradstudies.ucdavis.edu/ssupport/internal-travel.html>

UC SAN FRANCISCO:

Fletcher Jones Fellowship
<http://graduate.ucsf.edu/jones-fellowship>

Matilda Edlund Scholarship
<http://graduate.ucsf.edu/edlund-scholarship>

Ralph Kellogg Endowed Chancellor's Fellowship
<http://graduate.ucsf.edu/kellogg-fellowship>

Rosenberg-Hill Graduate Research Fellowship
<https://graduate.ucsf.edu/rosenberg-hill-fellowship>

UC LOS ANGELES:

Charles F. Scott Fellowship
<http://www.grad.ucla.edu/asis/entsup/fellgrnt.htm>

David Geffen Medical Scholarship
<http://medschool.ucla.edu/davidgeffenmedicalscholarships>

Dr. Ursula Mandel Scholarship
<http://www.grad.ucla.edu/asis/entsup/fellgrnt.htm>

Eugene V. Cota-Robles Fellowship
<http://www.gdnet.ucla.edu/asis/entsup/cotarobles.htm>

Gordon Hein Memorial Scholarship
<http://www.grad.ucla.edu/asis/entsup/fellgrnt.htm>

Graduate Opportunity Fellowship Program (GOFP)
Karekin Der Avedisian Memorial Endowment Fund
<http://www.grad.ucla.edu/asis/entsup/fellgrnt.htm>

Kasper and Siroon Hovannisian Fellowship
<http://www.grad.ucla.edu/asis/entsup/fellgrnt.htm>

Steven J. Sackler Scholarship
<http://www.grad.ucla.edu/asis/entsup/fellgrnt.htm>

Will Rogers Memorial
<http://www.grad.ucla.edu/asis/entsup/fellgrnt.htm>

UCLA Faculty Women's Club Scholarship
<http://www.grad.ucla.edu/asis/entsup/fellgrnt.htm>

Fellowship Directories

Available in the
 UCLA Graduate Division Fellowships & Financial Services Office 1228 Murphy Hall
 UCLA Scholarship Resource Center 233 Covell Commons
 UCLA Young Research Library Reading Room
 Your Local Public Library

Title	Year	Publisher
Directory of Financial Aids for Women 2014–2016	2014.....	Reference Service Press
Financial Aid for African Americans 2014–2016	2014.....	Reference Service Press
Financial Aid for Asian Americans 2014–2016.....	2014.....	Reference Service Press
Financial Aid for Hispanic Americans 2014–2016	2014.....	Reference Service Press
Financial Aid for Native Americans 2014–2016.....	2014.....	Reference Service Press
Financial Aid for Students of Armenian Descent.....	2006	Armenian Assembly of America
Financial Aid for Persons with Disabilities and Their Families 2012–2014.....	2012.....	Reference Service Press
Financial Aid for Veterans, Military Personnel & Families 2012–2014	2012	Reference Service Press
Foundation Fundamentals: A Guide for Grant Seekers	1980.....	The Foundation Center
Funding for Persons with Visual Impairments: Large Print Edition	2011	Reference Service Press
Funding for United States Study	2014.....	International Institute of Ed.
Graduate School Companion	2007.....	Random House Inc.
List of Graduate Scholarships and Fellowships	2014.....	www.e4fc.org.
That Do Not Require Proof of U.S. Citizenship or Legal Permanent Residency		
Money for Graduate Students in the Arts & Humanities 2010–2012.....	2010.....	Reference Service Press
Money for Graduate Students in the Biological Sciences 2010–2012.....	2010.....	Reference Service Press
Money for Graduate Students in the Health Sciences 2010–2012.....	2010.....	Reference Service Press
Money for Graduate Students in the Physical & Earth Sciences 2010–2012.....	2010.....	Reference Service Press
Money for Graduate Students in the Social Sciences 2010–2012	2010.....	Reference Service Press

Applying as an International Applicant

Do U.S. medical schools ever accept international students?

The short answer is yes, but it's not easy. Some U.S. medical schools accept and matriculate a small number of international applicants into their programs. In 2014, 62 schools indicated in the [Medical School Admission Requirements](#) that they would accept applications from international applicants. You can research an individual medical school's admissions policies on its website or within the "Application Deadlines and Requirements" section in the Medical School Admission Requirements.

In 2014, 1,901 foreign applicants applied to M.D.-granting programs in the United States and 409 of those applicants were accepted. Of those accepted, 300 matriculated into medical school.

Is the application process different for international students?

Primary Application

Most U.S. medical schools use the [American Medical School Application Service \(AMCAS®\)](#) to facilitate and streamline the application process. Although you will use AMCAS to apply, the service does not accept foreign transcripts (or translated/evaluated transcripts) and they will not be verified. Instead, when completing your application, you are welcome to add courses taken at foreign institutions with the understanding that these courses won't be verified, and an AMCAS grade point average (GPA) will not be calculated. However, individual medical schools may ask you for your transcript through their secondary application.

Randee Reid, admissions and residency officer at University of North Carolina School of Medicine adds, "Curriculum systems are different from overseas schools, and it is very helpful to medical schools to evaluate your progress in a program in a U.S. accredited four-year institution. If taking the prerequisite course work as a non-degree seeking student, the prospective applicant will need 30 credit hours or more in order to evaluate progress. The course work should be completed before applying to medical schools."

MORE INFORMATION

Medical School Admission Requirements:
www.aamc.org/msar

AMCAS: www.aamc.org/amcas

MCAT exam: www.aamc.org/mcat

Transcripts

International applicants who completed courses at an international school should follow the instructions provided on the AMCAS website for entering course work and requesting transcripts. If any of the courses were taken at a foreign institution, but credit was granted through an accredited U.S. or Canadian school and the courses appear on that official transcript, then that U.S. or Canadian transcript would be required. AMCAS will verify and include those courses in the AMCAS GPA. For instance, a course may have been taken through a study-abroad program sponsored by an American school, but hosted in a foreign country.

Citizenship/Visa Status

Be sure to clearly and accurately identify your citizenship and visa (if applicable) status on your AMCAS and secondary applications.

Language Proficiency

Within the AMCAS application, you will be able to indicate the languages you speak and your proficiency in each.

What options will I have for financial aid?

Only U.S. citizens and permanent residents are eligible for federal aid, which includes Direct Stafford, Direct PLUS, and Perkins Loans. In most cases, international students will need to secure private loans or institutional loans if offered by the medical school. In some cases, medical schools require applicants to prove they have sufficient financial resources to pay for all four years of medical school, or will require applicants to have the full amount in an escrow account.

Where can I take the MCAT® Exam?

Most U.S. medical schools require the [Medical College Admission Test \(MCAT®\)](#) for admission. The exam is administered several times a year in numerous U.S. locations and in some locations abroad. For a complete list of countries and specific testing locations, visit the MCAT website.

Please note that the exam is always administered in English regardless of the country in which you test. The name you use to register for and take the exam must be in English, and it must appear exactly as it does on your government-issued I.D.

Funding Opportunities Available to International Students

Grants, Scholarships and Fellowships

Africa–American Institute

www.aionline.org/programs/

American Association of Petroleum Geologists
(Grants-In-Aid) – Multiple Opportunities

<http://foundation.aapg.org/students/graduate/gia-program.cfm>

American Association of University Women

www.aauw.org/what-we-do/educational-funding-and-awards/international-fellowships/

American-Scandinavian Foundation

www.amscan.org/fellowships_grants.html

CONACYT – The Mexican Council on Science and Technology

www.conacyt.gob.mx/index.php/becas-y-posgrados

East–West Center

www.eastwestcenter.org/scholarships-fellowships

ETS Fellowship and Internship Programs

www.ets.org/research/internship

Georges Lurcy Charitable and Educational Trust

www.lurcy.org/bourses.html

Inter American Press Association – IAPA
Scholarships (Journalism)

<http://en.sipiapa.org/contenidos/want-a-scholarship.html>

International Union Against Cancer – UICC
Fellowships

www.uicc.org/fellowships

Josephine de Karman Fellowship Trust

www.dekarman.org/

NVIDIA Graduate Fellowship Program

<http://research.nvidia.com/graduate-fellowships>

P.E.O. International – Education Opportunities
for Women

www.peointernational.org/

Smithsonian Institution: <http://www.si.edu/>
Fellowship Opportunities:

<http://www.smithsonianofi.com/fellowship-opportunities/>

Social Science Research Council – International
Dissertation Research Fellowships

www.ssrc.org/programs/idrf

UC MexUS (University of California, Riverside –
open to students at all UC campuses)

www.ucmexus.ucr.edu/

Governmental & Non-Profit Organizations

Fulbright Program for Foreign Students/Institute
of International Education

<http://foreign.fulbrightonline.org/>

www.fundingusstudy.org/

Government of Canada

www.scholarships-bourses.gc.ca/scholarships-bourses/index.aspx?lang=eng

Organization of American States (OAS/OEA)

www.oas.org/en/scholarships/

Population Council

www.popcouncil.org/fellowships

Social Sciences and Humanities Research Council
of Canada

www.sshrc-crsh.gc.ca/funding-financement/index-eng.aspx

UNESCO (United Nations Educational, Scientific
and Cultural Organization) Fellowships, Study and
Travel Grants

www.unesco.org/new/en/fellowships

U.S. Department of State Hubert H. Humphrey
Fellowships

<http://humphreyfellowship.org>

WorldWideStudies Project of the Victor Pinchuk
Foundation

<http://pinchukfund.org/en/>

Resources Available Through Other Institutions

U.S. Universities

These resources have been compiled by other universities, but most of the fellowships listed are nationally competitive and do not require students to be enrolled in that particular university.

Harvard University -Funding Sources for International Students

www.gse.harvard.edu/financialaid/international/outside

Harvard School of Graduate Education (emphasis on Africa, but not all programs are Africa-specific)

<http://chora.virtualave.net/harvard-africa.htm>

University of Iowa – International Programs

<http://international.uiowa.edu/funding>

Scholarship/Fellowship Searches and Resources

These sources are provided for your information. UCLA is not responsible for their content, nor does their inclusion constitute an endorsement by UCLA.

Edupass – the Smart Student Guide to Studying in the USA (Financial Aid for International Students)

www.edupass.org/finaid/

Foreignborn.com

www.foreignborn.com/study_in_us/8-paying4school.htm

International Scholarships

<http://www.internationalscholarships.com/>

Summer Opportunities for Disadvantaged and Minority Students

Summer Opportunities for Disadvantaged and Minority Students NAAHP RESOURCE

There are also numerous comprehensive sites to search for listings such as:

- aamc.org/summerprograms
- explorehealthcareers.org/en/careers/programs
- nsf.gov/crssprgm/reu/index.jsp

Associations Supporting Students of Diversity

Many of the associations listed elsewhere on this site support students from all backgrounds and the goal of diversifying the health professions. Listed below are those whose main mission is to do so.

- [Student National Medical Association](#)
- [Latino Medical Student Association](#)
- [Association of American Indian Physicians](#)
- [American Medical Women's Association](#)
- [Asian Pacific American Medical Student Association](#)
- [Association of Native American Medical Students](#)
- [LGBT Committee in AMSA](#)
- [Minority Health Committee in AMSA](#)
- National Network of Latin American Medical Students
- [National Association of Medical Minority Educators](#)
- [For premed students of color](#)
- Society of American Indian Dentists

You can also search for other associations at the following sites:

- [Office of Minority Health](#) (Federal site)
- [Health and Human Services](#) (Searchable database of organizations nationwide)
- [Association of Minority Health Professions Schools](#) (Listed by their Foundation)

Clinical Experiences

Alaska Center for Rural Health and Health Workforce

[Rural Immersion Institute of the North \(RIIN\)](#)

Program Dates: July 12 - August 2, 2017

Deadline to Apply: November 1, 2016

Atlantis Project Fellowship

[Hospital Shadowing in Europe - 2017](#)

Program Dates: Varying Dates Throughout Summer 2017

Deadline to Apply: Rolling Admission

Baylor College of Medicine

[SMART Program](#)

Program Dates: May 29-July 28

Deadline to Apply: January 10, 2017

Summer Opportunities for Disadvantaged and Minority Students

[Collegiate Science & Technology Entry Program \(C-Step\)](#)

Must be a New York state Resident to be eligible.

Committee on Institutional Cooperation
[Summer Research Opportunities Program \(SROP\) - 2017](#)

Program Dates: Varying Dates Throughout Summer 2017

Deadline to Apply: February 10, 2017

COPE Health Scholars

[Summer Pre-Med Scholar](#)

Program Dates:

- Session 1: May 30 - July 29, 2017
- Session 2: June 19 - August 18, 2017
- Session 3: June 26 - August 25, 2017

Deadline to Apply: Rolling Admission

Cornell Graduate School

[ACCESS Summer Internship Program | Undergraduate Research](#)

Program Dates: June 5 - August 11, 2017

Deadline to Apply: February 1, 2017

Cornell

[Travelers Summer Research Fellowship Program](#)

Program Dates: June 19 - August 4, 2017

Deadline to Apply: February 1, 2017

Dana-Farber/Harvard Cancer Center

[CURE Program 2017](#)

Program Dates:

- Undergraduates: May 22 - August 11, 2017
- High School: June 19 - August 11, 2017

Deadline to Apply: February 17, 2017

Des Moines University

[Health P.A.S.S.](#)

Program Dates: June 3-23, 2017

Deadline to Apply: February 15, 2017

Duke University

[Duke University Summer Biomedical Sciences Institute](#)

Program Dates: June 10 - July 21, 2017

Deadline to Apply: March 1, 2017

Frontier Nursing University

[Courier Program Summer Service-Learning Internship](#)

Program Dates: June 2 - July 29, 2017

Deadline to Apply: February 9, 2017 at 5:30 PM EST

Georgetown University Medical Center

[Georgetown Summer Medical Institute \(GSMI\)](#)

Program Dates: June 19-July 28, 2017

Summer Opportunities for Disadvantaged and Minority Students

Deadline to Apply:

June 1, 2017 (Undergraduate, graduate, or post bacc students)

June 15, 2017 (remediating medical students)

Health Career Connection

[Summer 2017 Internship Program](#)

Program Dates: Varying Dates Throughout Summer 2017

Deadline to Apply: December 7, 2016

Health Sciences Diversity at Virginia Commonwealth University

[Allied Health Career Exploration](#)

Program Dates: June 5-16, 2017

Deadline to Apply: April 3, 2017

Illinois College of Optometry

[Focus on Your Future Summer Program](#)

Program Dates: June 26-30, 2017

Deadline to Apply: March 30, 2017

Keck Graduate Institute

[Summer Upper-Level Undergraduate Courses](#)

Program Dates: Varying Dates Throughout Summer 2017

Deadline to Apply: June 15, 2017

Marquette University

[Summer Science Enrichment Program](#)

Program Dates: Varying Dates Throughout Summer 2017

Deadline to Apply: April 1, 2017

Massachusetts General Hospital

[Summer Research Trainee Program \(SRTP\)](#)

Program Dates: June 5 - August 3, 2017

Deadline to Apply: January 23, 2017

Michigan State University

[Veterinary Medicine - Enrichment Summer Program](#)

Program Dates: June 4-23, 2017

Deadline to Apply: March 15, 2017

New York College of Podiatric Medicine

[Pre-Health Student Internship Program](#)

Program Dates:

- Session 1: July 25-28, 2017
- Session 2: August 8-11, 2017

Deadline to Apply: June 1, 2017

New York Presbyterian Hospital

[Summer Mental Health Practicum](#)

Program Dates: Varying Dates Throughout Summer 2017

Deadline to Apply: March 31, 2017

Summer Opportunities for Disadvantaged and Minority Students

Ohio State University

[Improving Diversity in Optometric Careers \(I-DOC\)](#)

Program Dates: July 10 - 12, 2017

Deadline to Apply: April 1, 2017

Ohio University

[Summer Scholars](#)

Program Dates: May 22 - June 23, 2017

Deadline to Apply: March 1, 2017

Ohio State University

[SUCCESS Program](#)

Program Dates: May 22 - July 29, 2017

Deadline to Apply: January 7, 2017

Oregon Health and Science University

[Undergraduate Summer Research Program](#)

Program Dates: Varying Dates Throughout
Summer 2017

Deadline to Apply: March 1, 2017

Rutgers - Robert Wood Johnson Medical
School

[Summer Clinical Internship Program](#)

Program Dates: June 6 - July 14, 2017

Deadline to Apply: April 15, 2017

Rutgers University

[Project L/Earn 2017](#)

Program Dates: May 30 - August 4, 2017
2017

Deadline to Apply: February 6, 2017

Rutgers University

[Gateway to Dentistry 2017](#)

Program Dates: May 31 - June 9, 2017

Deadline to Apply: October 11, 2016

Uganda Village Project

[Uganda Village Project](#)

Program Dates:

- June 14-August 13, 2017 (Team Members)
- June 11-August 13, 2017 (Team Leaders)

Deadline to Apply:

- International Intern Application Deadline:
Wednesday, February 1, 2017
 - Ugandan Intern Application Deadline:
Sunday, January 15, 2017
-

UCLA

[UCLA Pre-medical/Pre-dental Enrichment Program
\(UCLA PREP\)](#)

Program Dates: June 19-July 21, 2017

Deadline to Apply:

Summer Opportunities for Disadvantaged and Minority Students

Early Admission - February 1, 2017

Regular Admission - March 1, 2017

University of California, San Francisco

[Summer Research Training Program \(SRTTP\)](#)

Program Dates: May 30-August 2, 2017

Deadline to Apply: February 1, 2017

University of California, Berkley

[Opto-Camp](#)

Program Dates: July 10-14, 2017

Deadline to Apply: TBA - Application Opens
February 1, 2017

University of Connecticut

[Summer Research Fellowship Program](#)

Program Dates: May 31-July 28, 2017

Deadline to Apply: March 1, 2017

University of Illinois at Chicago

[Summer Pharmacy Institute](#)

Program Dates: June 5-9, 2017

Deadline to Apply: April 3, 2017

University of Massachusetts

[Summer Enrichment Program \(SEP\)](#)

Program Dates: May 28-June 23, 2017

Deadline to Apply: March 10, 2017

University of South Carolina

[APEX](#)

Program Dates: June 4-8, 2017

Deadline to Apply: First Come First Serve

[Camp Specifics](#)

Deadline to Apply: First Come First Serve

[PACES](#)

Program Dates: July 23-27, 2017

Deadline to Apply: Last week in July.

[Program Specifics](#)

Deadline to Apply: First Come First Serve

University of Vermont

[Summer Medical Prep Program](#)

Program Dates: June 19-July 14, 2017

Deadline to Apply: June 5, 2017

University of Minnesota

[Summer Institute in Biostatistics \(SIBS\)](#)

Program Dates: June 11-July 21, 2017

Deadline to Apply: March 1, 2017

Virginia Commonwealth University

[Summer Academic Enrichment Program](#)

Summer Opportunities for Disadvantaged and Minority Students

Program Dates: May 23-June 30, 2017

Deadline to Apply: February 1, 2017

Wesleyan University

[Summer and Post Bac Opportunities in the Health](#)

[Professions](#)

Program Dates: Locations Vary

Deadline to Apply: Deadlines Vary

Youth Health Equality Model of Practice
(YHEMOP)

[Health Equity Fellows Program](#)

Program Dates: June 5-28, 2017

Deadline to Apply: February 15, 2017

RESEARCH

Albert Einstein College of Medicine

[Summer Undergraduate Research Program](#)

Program Dates: June 5-July 27, 2017

Deadline to Apply: February 1, 2017

Biophysical Society

[Summer Research Program in Biophysics](#)

Program Dates: May 9-July 29, 2017

Deadline to Apply: February 15, 2017

Bridging the Gap

[Summer Fellowship](#)

Program Dates: June-August 2017

Deadline to Apply: Opening Spring 2017

Boston University

[Summer Undergraduate Research Fellowship](#)

Program Dates: Early June - Early August

Deadline to Apply: March 1, 2017

Caltech

[Summer Undergraduate Research Fellowships](#)
[\(SURF\)](#)

Program Dates: (Start Date) June 14,
2017

Deadline to Apply: February 22, 2017

Christian Brothers University

[Minority Health and Health Disparities International](#)
[Research Training \(MHIRT\)](#)

Deadline to Apply: December 30, 2016

Cornell University

[Travelers Summer Research Fellowship Program](#)

Program Dates: June 19-August 4, 2017

Deadline to Apply: February 1, 2017

Summer Opportunities for Disadvantaged and Minority Students

Cornell University

[Gateways to The Laboratory Summer Program](#)

Program Dates: June 5-August 8, 2017

Deadline to Apply: February 1, 2017

Fred Hutch Cancer Research Center

[Summer Undergraduate Research Program](#)

Program Dates: June 12-August 11, 2017

Deadline to Apply: January 13, 2017

Harvard University

[Summer Internships in Biological Sciences in Public Health](#)

Program Dates: June 11–August 5, 2017

Deadline to Apply: February 15, 2017

The Leadership Alliance

[Summer Research - Early Identification Program \(SR-EIP\)](#)

Deadline to Apply: February 1, 2017

Massachusetts Institute of Technology

[MIT Summer Research Program](#)

Program Dates: June 4 – August 12, 2017

Deadline to Apply: February 4, 2017



Shaping Careers. Changing Lives.

Summer Health Professions Education Program

The Summer Health Professions Education Program (SHPEP) gives students interested in health careers the opportunity to have a transformative summer experience. The program has been shaping careers and changing the lives of premedical and pre-dental college students for 30 years, formerly as the Summer Medical and Dental Education Program (SMDEP). Now, other health careers, such as nursing, pharmacy, physician assistant, and public health, are part of the program.

SHPEP connects opportunity with student success.

The FREE six-week summer enrichment program helps college students enhance their academic proficiency and career development opportunities in a health profession. Participation in the summer enrichment program may better position students for acceptance into advanced-degree programs.

To be eligible, you must:

- Be a U.S. citizen, a permanent resident, or an individual granted deferred action for childhood arrivals (DACA) status by the U.S. Citizenship and Immigration Services.
- Be a college freshman or sophomore at the time of application.
- Have a minimum GPA of 2.5.
- Identify with a group that is underrepresented in the health professions.

The SHPEP application opens Nov. 1.

Learn more at shpep.org.

Application Opens*
Nov. 1

Application Deadline
Feb. 5

*Application dates are subject to change. Please visit shpep.org for the most up-to-date information.

 facebook.com/shpepconnect

 twitter.com/shpepconnect

 instagram.com/shpepconnect

**SUMMER HEALTH PROFESSIONS
EDUCATION PROGRAM**

Shaping Careers. Changing Lives.



Help Build a Culture of Health

The Summer Health Professions Education Program is working toward building a Culture of Health (evidenceforaction.org/what-culture-health) that will enable all to live longer, healthier lives now and in generations to come. The SHPEP prehealth scholars are inspired to become tomorrow's change leaders in their local communities and throughout the nation.

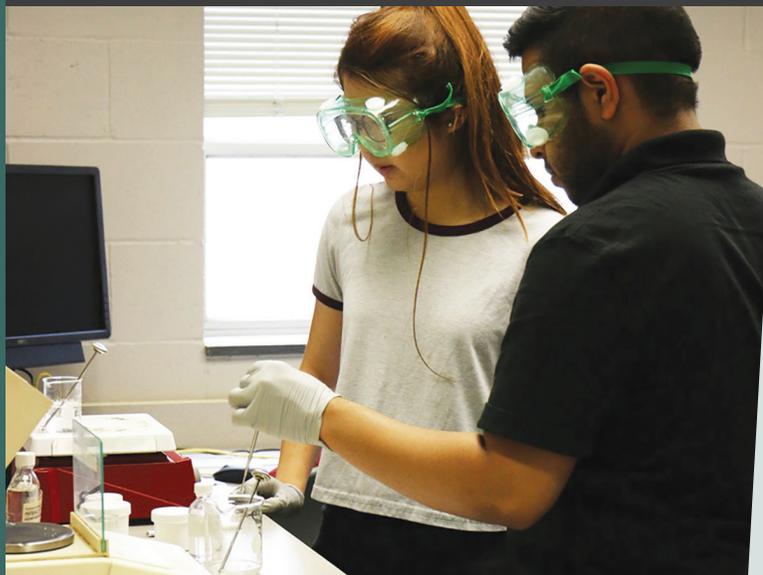
What types of activities will students participate in during the summer program?

- Academic enrichment in the basic sciences and math
- Career development activities
- Learning and study skills workshops
- Exposure to clinical settings
- Workshops in financial planning and health policy



What costs are covered by the program?

All student housing costs, meals, and travel to and from the program site are covered by the program. Students are awarded a \$600 stipend for successfully completing the program.



Visit shpep.org for more information about the program and how to apply.

SHPEP is a national program funded by the Robert Wood Johnson Foundation with direction and technical assistance provided by the AAMC (Association of American Medical Colleges) and the American Dental Education Association.

Support
provided by

Robert Wood Johnson Foundation



SUMMER AND GAP YEAR OPPORTUNITIES

Looking for something to do between graduation and medical, dental, or graduate school? These are some of the many opportunities available ranging in length from summer to one to two years. Certain opportunities may be directly related to medicine or healthcare, while others may be a chance to explore another side of working with people, such as teaching or community organizing. You may consider fellowships, internships, research, volunteering, part-time employment, etc. Whether you are looking to improve your candidacy to medical or dental school, experience something new before entering your program, or join the workforce to gain some real-world experience, there is an opportunity out there for you!

This is only a sample of the many opportunities available. If you wish to explore additional resources or learn more about what to do upon graduation before entering a graduate or professional program consider attending one of the many [events put on by HPAO](#).

Volunteer Opportunities and Internships

[American Cancer Society Internships](#)

Volunteer opportunities available with patient service programs

The internship program at the American Cancer Society provides an opportunity for people to make a difference as they gain valuable hands-on experience in the non-profit sector and a greater understanding of the Society's mission.

[American Public Health Association Internships](#)

3 months- 1 year

The American Public Health Association is the oldest, largest and most diverse organization of public health professionals in the world and has been working to improve public health since 1872. A variety of internships for undergraduate and graduate students are available.

[AYUDA International Dental Clinics](#)

As a private non-profit humanitarian dental, medical and educational organization, AYUDA's mission is to be actively engaged in improving and sustaining the oral health of people in underserved areas of the world. By providing assistance through treatment, training and education, AYUDA helps promote health education and social betterment.

[Cedars-Sinai Med Volunteer Program](#)

The Independent Student (IS) Volunteer Program is designed for collegiate-aged students who are seeking a specific role in either a clinical or research experience. For students seeking an experience in a specialized field of medicine, this program allows you an opportunity to contact a specific physician and/or researcher to secure a volunteer position in their area of interest. This program is open throughout the year and is co-managed by Academic Affairs.

[Center for Patient Partnerships](#)

Do you know aspiring health professionals taking time off before pursuing professional school who are looking for a transformative experience? For recent graduates who would benefit from additional direct patient contact and learning about social determinants of health, the Certificate Program in Consumer Health Advocacy at the University of Wisconsin-Madison's interdisciplinary Center for Patient Partnerships might offer just the experience to round out their

resume. Students learn about patients' experiences in the health care system by providing health advocacy. Now our 12-credit certificate is available online. Please see Center for Patient Partnerships's [transformative experience for gap years students \(.pdf\)](#).

Sarah Davis, JD, MPA

Associate Director, University of Wisconsin-Madison
975 Bascom Mall - Suite 4311
Madison, WI 53706
P: (608)265-6267
F: (608)265-4332
sdavis2@wisc.edu

[Community Clinic Association of Los Angeles County](#)

CCALAC serves and represents the interests of its free and community clinic Members. Our 47 Members operate over 140 sites in L.A. County. They provide quality primary care (including medical, dental and mental health services) for the uninsured and medically underserved populations.

[Cope Clinical Care Extender \(CCE\) Internship Program](#)

Saint Francis Medical Center

The Clinical Care Extender Internship features a clinically-focused experience that gives pre-health professionals unprecedented access to direct patient care. Clinical Care Extender Interns become valuable members of the patient care team alongside nurses, physicians and allied health professionals in clinical and administrative settings. Interns receive training to participate in basic patient care tasks such as bathing, changing and feeding patients as they rotate among the different departments within the hospital.

[COPE Health Solutions](#)

COPE Health Solutions is a leading health care corporation based in Los Angeles, California. We partner with hospitals, health systems and other health care providers to help them achieve visionary, market relevant health care solutions.

[National Institute of Health \(NIH\)](#)

Research and training opportunities including summer internship programs, summer research fellowship programs, post-baccalaureate research opportunities, and graduate education programs.

[Operation Smile](#)

At Operation Smile, our volunteers make a difference in the lives of children every day. And by helping others, they impact their own lives as well. We hope you'll be moved to help us make a difference in the lives of children. And join our world of compassion.

[Saban Free Clinic](#)

Los Angeles Free Clinic

The Saban Free Clinic, in collaboration with strategic partners, serves as a medical home for the underserved and those who are most vulnerable by providing comprehensive, dependable and affordable quality health care in a caring environment.

[UCLA Venice Dental Center](#)

The School of Dentistry is committed to providing care to underserved populations. Since 1969, it has provided oral health care to underserved populations through its Venice Dental Center and by partnering with other hospitals, clinics, and centers in Venice, West Hollywood, Northeast San Fernando Valley and in downtown Los Angeles.

[Venice Family Clinic](#)

Venice Family Clinic provides more than 106,000 primary care, specialty care, mental health, dental, and health education visits annually. All services – including diagnosis, treatment, medications, follow-up care, and laboratory tests

– are provided free of charge. Particular emphasis is placed on the needs of women, children, the homeless, and those with chronic diseases.

Fellowships

Emerging Leaders Program

2 years

The Emerging Leaders Program (ELP) is a competitive, two-year, paid, federal internship with the Department of Health and Human Services (DHHS). The program provides a unique opportunity to develop analytical and critical leadership skills in one of the largest federal agencies in the nation.

Department of Health and Human Services

2 years

Opportunities for College Graduates are intended to provide individuals who have graduated from an undergraduate or graduate program with an opportunity to integrate their education and experience into full-time employment with the Federal government. The Presidential Management Fellows Program (PMF), the HHS Emerging Leaders Program (PMF), and the Federal Career Intern Program (FCIP) are a few programs for graduates.

Japan Exchange and Teaching Programme (JET)

Each participant in the JET Programme brings their culture to a local community in Japan, helping the country to gain personal contact with peoples of other countries. Secondly, each JET participant will learn a great deal about Japan, its culture and its people. It is expected that JET participants will share what they learned with their family and friends upon returning home. Program requires relevant international experience. Include transcripts from study abroad and appropriate LOR's.

Presidential Management Fellows Program

1 year

The purpose of the Program is to attract to the Federal service outstanding men and women from a variety of academic disciplines and career paths who have a clear interest in, and commitment to, excellence in the leadership and management of public policies and programs.

Princeton in Asia Fellowship Program

PiA offers yearlong, service-oriented fellowships in 18 Asian countries in the fields of education, international development (NGOs), environmental advocacy, journalism, law and business, with a majority of fellows working as English teachers at universities and high schools. PiA fellowships are open to graduates or graduating seniors from all accredited colleges and universities.

U.S. Schweitzer Fellows Programs

1 year

The U.S. Schweitzer Fellows Programs provide community service fellowships for graduate students in health-related professional fields who are dedicated to addressing unmet health needs in local areas.

Research

A good way to get involved with research is to network with current and past professors or to get in touch with faculty members within various academic departments. There may be opportunities here at the University of Southern California or the departments may know of grant money available for temporary research positions in your field after graduation.

[AAMC Graduate Research, Education, and Training \(GREAT\) Group](#)

Summer

The GREAT Group is an AAMC Group established quality education in the biomedical sciences. They have a link to Summer Undergraduate Research Programs (by school) at their website.

[Health Sciences Research Opportunities](#)

Summer

This website from Swarthmore College provides a list of links to summer research programs available to undergrads and recent grads in the U.S.

[National Science Foundation \(NSF\)](#)

NSF supports a variety of science, engineering and education research in nearly every field.

[NeoGenomics Laboratories](#)

NeoGenomics is a state of the art comprehensive testing laboratory headquartered in Fort Myers and Tampa, Florida with additional locations in Nashville, Tennessee; Houston, Texas; and Irvine, Fresno, & Aliso Viejo, California. We offer a competitive salary and comprehensive benefits to include health, dental, life & disability insurances, a Section 125 plan, a 401(k), flexible spending account (FSA), employee stock purchase plan, and relocation assistance.

[Saban Research Institute](#)

Affiliated with Children's Hospital, Los Angeles

The Saban Research Institute is one of the few freestanding research centers in the U.S. where scientific inquiry is combined with clinical care and is devoted exclusively to children.

[Weill Cornell/Rockefeller/ Sloan-Kettering Gateways to the Laboratory Program](#)

The program is highlighted by the NIH as one of the top ten summer programs for underrepresented and disadvantaged students. Every year, 15 students embark on a 10 week intensive journey of learning about the challenging and gratifying road of becoming a physician-scientist.

Service Opportunities

[AmeriCorps State and National](#)

9-12 months

The largest of AmeriCorps programs, AmeriCorps State and National provides funds to local and national organizations and agencies committed to using national service to address critical community needs in education, public safety, health and the environment. Members serve full- or part-time over a 9- to 12-month period.

[AmeriCorps NCCC](#)

10 months

AmeriCorps NCCC (National Civilian Community Corps) is a full-time, team-based residential program for men and women age 18–24. Members live on one of five campuses, located in Denver, Colorado; Sacramento, California; Perry Point, Maryland; Vicksburg, MS; and Vinton, Iowa. AmeriCorps NCCC requires an intensive, 10-month commitment.

[AmeriCorps VISTA](#)

1 year

AmeriCorps VISTA is the national service program designed specifically to fight poverty. VISTA members commit to serve full-time for a year at a nonprofit organization or local government agency, working to fight illiteracy, improve health services, create businesses, strengthen communities, and much more.

[City Year](#)

1 year

City Year corps member serve full-time as tutors and mentors in schools, running after-school programs, leading and developing youth leadership programs, and vacation camps to make a difference in the lives of children and their communities.

[Citizen Schools](#)

2 years

The Citizen Schools National Teaching Fellowship is a service program offering a two-year, leadership development experience, including service as a team leader at a Citizen Schools campus, professional development with a partner organization in the community, and the opportunity for optional enrollment in a pioneering Master's program in out-of-school learning.

[Teach for America](#)

2 years

Teach for America aims to end educational inequity. TFA corps members serve in high-need schools for two-year commitments.

[Peace Corps](#)

2 years

Peace Corps Volunteers serve in 74 countries in Africa, Asia, the Caribbean, Central and South America, Europe, and the Middle East. Collaborating with local community members, volunteers work in areas like education, youth outreach and community development, health, and information technology.

Overseas Opportunities

This is just a small sample of overseas opportunities. These sites provide a great place to begin your search for information and postings regarding work, volunteer, and internship opportunities abroad.

[AIESEC](#)

AIESEC is a global, non-political, independent, not-for-profit organization run by students and recent graduates. Its members are interested in world issues, leadership and management. AIESEC provides its members with an integrated development experience comprised of leadership opportunities, international internships and participation in a global learning environment.

[BUNAC](#)

BUNAC offers a range of work abroad, volunteer abroad, and teaching overseas programs to destinations such as Canada, Australia, New Zealand, Cambodia, South Africa, Ghana, China, and Peru.

[ChildVoice International](#)

10-12 weeks in spring, summer, and fall

ChildVoice International is quickly expanding in northern Uganda. Opportunities include, but are not limited to, adult and child education, psycho-social rehabilitation, community health, spiritual leadership and development, income generating projects, microfinance, art, physical and occupational therapy, administrative and organizational tasks, and agriculture.

Global Healing HEAL Internship

1-3 Months

Health Education & Advocacy Liaisons (HEAL) internships give undergraduate and medical students the chance to work with physicians at the Roatan Volunteer Pediatric Clinic (RVPC) in Honduras.

Global Brigades

This organization seeks groups of passionate volunteers who mobilize toward positive social change. Global Brigades is the world's largest student-led global health and sustainable development organization. Since 2004, Global Brigades has mobilized thousands of university students and professionals through nine skill-based service programs to improve quality of life in under resourced communities.

International Service Learning

As a socially responsible international educational NGO, ISL enlists medical and educational volunteer teams for the provision of services to under-served populations in Central and South America, Mexico, the Caribbean, and Africa.

Peace Corps

2 years

Peace Corps Volunteers serve in 74 countries in Africa, Asia, the Caribbean, Central and South America, Europe, and the Middle East. Collaborating with local community members, volunteers work in areas like education, youth outreach and community development, health, and information technology.

Considering a Postbaccalaureate Premedical Program

What is a postbaccalaureate premedical program?

The term “postbaccalaureate” describes programs that begin after an undergraduate degree and are designed specifically to support the transition from an undergraduate to a professional school, such as a medical school, as well as enhance an applicant’s competitiveness for admission. There are several types of programs available designed to address a particular need or deficiency, such as academic record enhancement, career change, MCAT® exam prep, as well as programs for underrepresented or disadvantaged students.

Will a postbaccalaureate program improve my chances of getting into medical school?

It depends on the strength of the program, whether the program has a linkage agreement with a medical school, and most important, how successfully you complete the program. If you do well, you’ll demonstrate successful completion of premedical requirements, as well as a continued commitment to your goal of a career in medicine. If you have the opportunity, take upper-level course work to show that you can handle advanced material. According to Grace M. Hershman, director of Postbaccalaureate Premedical Programs at Temple University, “Competition for admission to medical school is intense, so performing extremely well in an intense premedical postbaccalaureate program will demonstrate to medical school admissions committees that you are able to sustain a high-level of academic achievement.”

How do I find the program that’s best for me?

It’s a good idea to talk to your pre-health advisor or the admissions dean at the medical schools you’re interested in about whether a postbaccalaureate program would enhance your application. If you have a specific weakness, look for a program that specifically addresses it. There are programs available to enhance the various types of deficiencies many applicants face. You can search by program type in the AAMC’s free Postbaccalaureate Premedical Programs database at <https://services.aamc.org/postbac/>.

What are the financial considerations involved with this type of program?

Postbaccalaureate programs can be expensive and may require you to finance some or all of the tuition through loans. If you continue directly from the program to medical school and residency, be sure to remember that interest from these loans will continue to accrue throughout your education and residency and result in substantial education debt. Speak to the financial aid officer at your school or the institution you plan to attend to learn the full financial implications involved.

How long does it take to complete a program?

There are several different types of programs. Most range from one to three years depending on the type of degree awarded at the end of the program.

What degree will I get after I complete the program?

Degrees awarded vary from program to program. Some programs offer a certificate of completion while others offer a master’s degree. There are advantages to seeking programs that lead to a master’s degree, especially if you decide ultimately not to pursue medical school. The AAMC’s Postbaccalaureate Premedical Programs database reports on degree information for each program listed.

What are “affiliations” or “linkage agreements?”

When researching programs in the AAMC’s Postbaccalaureate Premedical Programs database, the “affiliations” row describes any health professions program or medical school that has a relationship with a postbaccalaureate program. Some profiles may mention a linkage agreement with an institution. In this case, there may be an agreement for conditional acceptance into a medical school based on the level of performance in the program.

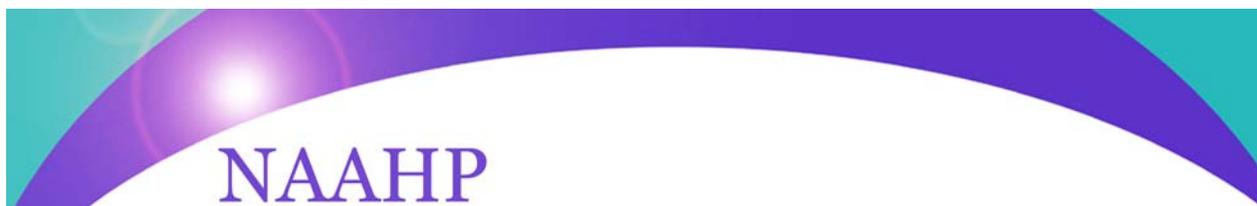
MORE INFORMATION

FIRST fact sheet on postbaccalaureate programs:

https://www.aamc.org/services/first/first_factsheets/112310/postbacprograms.html

What it’s Like to Do a Postbaccalaureate Program:

<https://www.aamc.org/students/aspiring/experience/358536/postbaccprogram.html>



Composing a Letter of Evaluation that Captures The Applicant as an Individual

<p><i>Joe Workman, Ph.D.</i> Associate Professor of Chemistry, Chair, Pre-Medical Advisory Committee, Centre College</p>	<p><i>Thomas Oeltmann, Ph.D.</i> Associate Professor of Biological Science, Health Professions Advisor, Vanderbilt University</p>	<p><i>Carol Elam, Ed.D.</i> Professor of Behavioral Sciences, Assistant Dean for Admissions and Medical Education Research, University of Kentucky College of Medicine</p>
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This is a revised version of an article originally printed
in the March 2005 issue of *The Advisor*, Vol 25, 1 , pp.20-26.

One of the most daunting challenges to premedical advisors is writing the letter of evaluation for medical school applicants from their institutions. Letters provide information used by medical school admissions committees for both screening and selection decisions. In fact, medical school admissions officers responded overwhelmingly positively to a national survey gauging the importance of the advisors' letters, stressing that the premedical letter has influence on, and contributes to the committee assessment of candidates for admission.¹

In reading the letters written by advisors regarding the suitability of applicants for medical school, medical school admissions committee members are looking for useful, candid, and honest information that will allow them to make better selection decisions.² However, letters from some institutions are routinely categorized as being not very helpful in the admissions process.³ Letters of evaluation described as least helpful by admissions committee members at six medical schools across the southeastern United States had one or more of the following characteristics: a repetition of information from the application, unsubstantiated superlatives or vague generalities, description of a grade in one particular class (an indication that the letter writer had a limited relationship with the applicant), or inclusion of irrelevant information regarding such issues as the applicant's family connections or the applicant's religious beliefs.³

Klein (1995) concluded that both advisors and admissions committee members could be left feeling either satisfied or dissatisfied with both the effort it takes to write letters and final product itself.⁴ We believe that, most of the time, letters are helpful, leaving both the writer and the reader satisfied with the information provided. In those cases, the letters of evaluation contain important and unique information to help admissions committees know more about the personal characteristics, interpersonal qualities, classroom abilities, and

exposure to medicine of applicants.¹ Such informative letters help establish good working relationships between the premedical advisor and the medical school admissions committee, by building a sense of trust in their content and communication.

We contend that there is an art to writing letters of evaluation, and that some of the best approaches to letter writing can be learned. In this paper we will address two aspects of letter writing, obtaining the necessary information and crafting the language of the letter.

Getting to Know the Students

Where do advisors obtain information they use to write knowledgeable letters about their students' academic abilities, personality characteristics, relevant experiences, and overall suitability for a medical career? How do they come to know their students as unique individuals with unique qualities and circumstances? Ultimately, it is the applicant's responsibility to provide information about herself or himself to both faculty and the premedical advisor. However, settings for interactions are many. Most premedical advisors serve as academic counselors to premedical students. Premedical advisors holding faculty positions may teach aspiring medical students in their courses. Advisors with active research programs may employ students in their research laboratories. Some premedical advisors participate in study abroad programming and may come to know students in living and learning settings. Alternatively, premedical advisors may solicit comments from other faculty who know the applicant better.

Advisors may also learn about their students through review of data related to their academic performances. To understand the student's academic abilities, the advisor carefully examines the student's academic record in college, including course work taken and grades earned. In preparing to describe the applicant's academic aptitude and scholarship, it is helpful for the advisor to have knowledge of the student's classroom behaviors including work ethic, preparation, and attendance.^{1,3} Advisors usually have access to the student's performance on the Medical College Admission Test (MCAT). Some advisors even have access to the student's performance on college entrance examinations, such as the ACT or SAT. Through review of standardized scores prior to admission to the undergraduate program, grade point averages attained in college, and MCAT scores, advisors can determine whether the student's undergraduate performance is in keeping with his or her abilities as measured by standardized tests. Should student performance in the classroom fall short of the expected aptitude, advisors can often clarify unique circumstances or hardships faced that may have influenced the applicant's classroom performance in the letters they write.

Writing the Letter

Premedical advisors may work with applicants on their own, or with other faculty who comprise an advisory committee. The advisory committee members may come together to interview aspiring applicants to learn more about their accomplishments and personal qualities prior to contributing to the letter of evaluation. Within the premedical committee, individual faculty may each be asked to draft a separate letter on behalf of selected students. When the premedical advisor sits down to write the letter of evaluation on an individual applicant, he or she draws information from the previously outlined interactions and sources. The premedical advisor may be asked to draft a singular letter, representing the committee, or make summary comments, interpreting and synthesizing the separate letters written by individual faculty members. Medical school admissions committee members usually report that it is also helpful for the advisor to rank the applicant in categories and compare the student to past successful applicants.

Regardless of the authorship of the letter of evaluation, there are necessary topics that are deemed helpful by admissions committee members. Topics that should be incorporated in the letters include information addressing the personal characteristics (e.g., integrity, honesty, reliability, professionalism, determination, leadership, and motivation) and social skills (e.g., interpersonal and communication skills, ability to interact in groups and establish peer relationships, empathy, and altruism) of the applicant.³ Importantly, most admissions officers and admissions committee members value both positive and negative information on applicants as this combination typically gives them a realistic perspective of the applicant's strengths and weaknesses.⁵

Crafting the Language: Addressing Personal Characteristics and Social Skills

In thinking about the letter writing, it may be helpful to consider tips dispensed in composition classes that are aimed at assisting students in writing good narration and description. To demonstrate logical thinking in composition, students are taught to approach their subject matter objectively, analyzing the varied points of view, and working to convey insight and understanding.⁶ The same considerations apply in crafting the letter of evaluation. Information that faculty obtain by knowing, teaching, advising, and working with the applicant is more helpful than providing lists of the applicant's grades or activities that are readily available from the application materials. The analysis, insight, and understanding that advisors can supply in the letters that describe *who the applicant is as a person* receive great consideration by admissions committee members.

Some authors of letters of evaluation have stated that they are unsure of the types of information about the personalities of their students that should be included in the narrative. They have expressed difficulty in describing and interpreting student behaviors and attitudes. Because medical school admission committee members consider both positive and negative aspects of key personal qualities, social skills, and relevant experiences and abilities when selecting students who are suitable for entrance into the medical school, it is important to incorporate such information in the letters of evaluation.

Examples of narrative comments extracted from letters of evaluation that describe the strengths and weaknesses of applicants are provided as follows. While we offer these passages as descriptive samples of qualities of individual students, we do not presume or desire that these statements should be incorporated into others' letters verbatim. Rather, they serve as models of language that could be imitated in crafting the descriptive passages related to personal qualities of individual students. Samples of statements describing leadership, ability to work collaboratively, honesty and integrity, responsibility and dedication, motivation, empathy, communication skills, service to others, problem solving ability, exposure to the profession, and common sense and judgement are provided. General definitions of strengths and weaknesses regarding each quality are given, and passages are categorized accordingly. Note that statements may be appropriate for more than one category. Some of the statements are derived from summaries of faculty evaluations constructed by the premedical advisor; others are from individual professors. All have been modified to protect the identity of students and their institutions.

Leadership

Strengths (ability to direct, organize, and/or take charge):

“Leads by example and organizational skills, not by an assertive presence”.

“Vanessa knows exactly when to lead and when to let go; when to speak and when to listen; when to assume control and when to delegate authority. She negotiates this delicate balance between leading and listening better than almost any other student I have seen.”

“Melissa has excellent leadership ability. She has the ideas and the ability to convince others to act on them. She inspires respect and trust. She works well with others and is not abrasive or arrogant.”

“This year John was given a difficult task of being the Resident Assistant for both upper class women and freshmen men. He did an exceptional job. He was very compassionate to residents on his hall who had severe physical and emotional difficulties. He provided creative educational and social programming for the residents and truly went above and beyond the call of duty. He maintains his calm under pressure and responds appropriately to crisis situations.”

Weaknesses (concerns about passivity):

“Marianne is definitely a good follower. She does not have the assertiveness, the strength of character, or ego to be an effective leader. She fits smoothly into groups, quietly going about the business of doing what is requested from her.”

“Patricia can work well on a team, but I do not see her as a leader-she isn’t very aggressive and does not like to tell people what to do.”

“Peter will have more problems with interpersonal matters because he tends to be on the quiet side. He interacts with a lot of people, but he does not seem to contribute as much.”

“My impression is that Ellen, although not really a loner, is nevertheless comfortable working alone. She could work in a team, but I do not think she would seek its leadership.”

Ability To Work Collaboratively

Strengths (skill in bringing others together in a constructive manner):

“Stephanie works well with others. She is an outstanding and dedicated leader, or a cooperative group member. She has shown a real willingness to reach out and get involved in a variety of different settings and with all different kinds of people.”

“I owe him something of a debt. He was one of those rare students who function as catalysts for the entire class. His intellectual curiosity and willingness to participate set the tone for a whole term of "Introduction to Humanities" and made my life as a teacher much easier.”

“While performing well in my classes was important to him, he seemed equally dedicated to understanding the science beyond what was going to be on the exam. His presence in class was refreshing because he was always willing to answer difficult questions even if he looked foolish. He was very generous with his time when it came to assisting other students who were having difficulty with the material. There is usually a good atmosphere in the class when the top student is not competitive.”

“I look forward to Mike’s contributions to our group meetings. He takes the discussions very seriously. He listens first and then speaks only when he has something meaningful to contribute. As a result, his peers hang on every word and really seem to value his opinion.”

Weaknesses (concerns about social skills and/or control within a group):

“He seems not to be part of any group. He is able to reach decisions and take actions independent of others.”

“While Susie is active in a couple of organizations on campus, she normally goes her own way and does what she considers to be of interest to her and of importance to her.”

“He takes great pride in fastidious techniques that nearly always produce accurate and precise results. He works very well with other bright students. When paired with students less capable than he, though, he tends to dominate the group a bit.”

“Theresa has an abundance of self-confidence. Although this confidence is merited by her abilities, she has yet to master the skill of communicating her level of proficiency without alienating her colleagues.”

Honesty and Integrity

Strengths (high moral standards and values):

“She is an especially conscientious, and honest person. These qualities are so basic to her personality that she inspires an unusual amount of trust from others. Her integrity and honesty are of the highest order.”

“Unlike some students who participate in activities simply to broaden their resumes or to earn praise, Mike does everything with a purpose and the intention of making a difference with no desire for recognition.”

“As an RA in a freshman hall, Nick dealt with several delicate situations professionally, and with an easy, natural manner. He was able to enforce all college policies and regulations without alienating his peers and earned their respect and friendship in the process.”

“As a captain of the baseball team, he had to make decisions that pitted him between the coaches and his teammates. He was willing to make a decision that he believed was right, even though his teammates did not agree.”

Weaknesses (concerns about morality, deception, or reputation):

“You will notice from John’s transcript that he received an “F” grade in Organic Chemistry during the Spring of his sophomore year. This was the result of an unfortunate incident involving the university Honor Code. John has assured me that he will address the details surrounding this incident in his personal statement on the AMCAS application.”

“My concern regarding Ian’s integrity relates to a situation where he had the opportunity to take leadership and stem some poor attitudes that were being detrimental to our soccer team. Rather, he allowed them to continue and, in my opinion, silently encouraged them to continue. This situation illustrates my concern for Ian and is an area where he needs to mature.”

Responsibility and Dedication

Strengths (ability to be accountable and complete commitments as expected):

“Matt is obviously disciplined, perseverant, and thorough in his work. He is a very admirable student and one I could easily regard as a professional colleague.”

“Catherine is an extremely hard worker, is self-motivated, and self-reliant. She is aware of her duties and completes them. In terms of her perseverance and application, she is absolutely first rate.”

“He completes what he starts and works until he is done. He applies himself to the task at hand with a minimum of fuss. He has excellent work habits and self discipline.”

“Alan has been a paramedic for five years and carries this responsibility when he is not on the job. He keeps surgical gloves and a breathing aid in his backpack just in case his expertise is needed. He has impressed me with his stories of dealing with life-threatening situations as well as dealing personally with patients and their families. Alan has a very cool, calm disposition that will allow him to interact positively with his patients and colleagues.”

Weaknesses (concerns about priority setting, purposefulness):

“One must point out that his academic performance may reflect the added effort expended on organizing his rock band and performing at many social activities on campus; perhaps a sign of misplaced priorities.”

“Mary’s undergraduate performance reflects the undirected efforts of a potentially bright student. Since she has dedicated her efforts towards medical school, her grades have been more reflective of her ability.”

“He is committed to medical school, but he gets so involved in so many things as to be distracted from the main mission. His energies have not always been directed towards academic matters. He is capable of much better grades and it seems likely that, away from the distractions of undergraduate life, he will demonstrate this.”

“His decision to not engage me in a more formal conversation about his medical school application process is indicative of the too laid-back approach he has taken to his academic pursuits. He is a nice, pleasant individual with a great deal of academic potential who just does not rise to the high standards that he is capable of pursuing.”

Motivation

Strengths (ability to direct focus, manage time):

“Jane is extremely well adjusted and highly motivated. She maintains a positive outlook regardless of any situation. She is resilient and self-assured while still acknowledging how much she has to learn.”

“She has the ability to make tough decisions when it is necessary. She knows what has to be done to reach her goals and she is willing to back these decisions with work. Carey is highly motivated and takes responsibility for her own learning but seeks advice comfortably.”

“Since she is a single mother who puts in many hours a week working to support herself and her daughter, she is clearly juggling much more than the traditional student. The hardships she has overcome and the experiences she has had make her much more qualified for medicine than many students. I can only say that her achievements in the face of such opposition humble me.”

“I have recognized in Jason a constant search for a challenge. His high GPA is evidence of the way he approaches his academics. His grades are all the more remarkable when considering his extra-curricular activities. Jason is on three varsity sports teams, he is a beautiful glass blower and accomplished ceramicist.”

Weaknesses (lack of drive, questions regarding internal or external locus of control):

“I feel that Mr. Carter is not strongly motivated. Whatever the reason, his performance has definitely been lackluster. If he could take additional science courses and show improvement, no doubt I could raise my level of enthusiasm for him.”

“He has been planning on going to medical school since I have known him, but he has not been able to clearly explain why whenever I have asked him about it. He certainly has the intellectual ability to do well, just not a lot of passion.”

“Bill seemed to me to be an underachiever. He did tremendously well on the MCAT, but I do not know him well enough to say that his performance on standardized tests will translate into success in medical school. My major reservation is Bill’s lack of a strong work ethic. Perhaps he will mature rapidly in medical school in this regard.”

“Although Will’s GPA of 3.5 is solid, his performance in my class, in which he earned a B, was not as strong as our premed students that I recommend with greater enthusiasm. I am not aware of his involvement in extracurricular activities that might have placed a time constraint on him. The other reason that I do not recommend Will more enthusiastically is that I do not see the leadership potential or the level of maturity that I expect of premeds at his stage. Will often seems to be negative in his outlook. I have heard several times from colleagues that Will questions his instructors on missed exam questions, as if the instructor is at fault for his mistake.”

Empathy

Strengths (ability to understand others’ feelings or ideas):

“Mary has participated in a wide variety of campus activities but, for her, the most important has been her involvement with the Magdalene House, a half-way house for former prostitutes and substance abusers. She especially enjoys being a role model for these women and helping them to recover their self respect.”

“As hard as he worked for himself, he had a genuine concern for other students and tried to assist them whenever possible. I found his insights on the problems many students were having in my class to be very valuable for my efforts to improve my teaching.”

“Larry served as one of the student coordinators for four major campus blood drives. His initiative in preparation for the events was impressive. He and her partner handled every detail of the event. They recruited donors as well as volunteers to staff the drive. They also managed the publicity as well as the communication with the blood center staff. Even more impressive that the work leading up to the drive was the way Larry conducted himself during the event. Any moment not in class was spent at the drive making sure everything ran smoothly. With his easy manner, Larry managed to put donors at ease.”

“Jane really separates herself from the typical pre-med student in her personal characteristics. She has a quiet confidence that serves her well. She is a very good listener and sets people at ease. I admire her for her involvement as a rape-crisis volunteer. She seems ideally suited for this service because of her even temper and sympathetic nature. You cannot talk to Jane for any period of time without knowing she listened and understood your point of view. Her interest in medicine comes from a journey of self-discovery and introspection.”

***Weaknesses** (Lack of insight or care into the feelings of others):*

“She’ll be at the top of her class in medical school, and somewhere along the way in the next 4-8 years, her hard-driving, sometimes tactless, approach to interacting with people will be tempered with appropriate restraint and empathy.”

Communication Skills

***Strengths** (ability to interact interpersonally):*

“She is an outgoing person. She is at ease with her peers or elders and has no difficulty in communicating. She is never at a loss for words and always seems to be at ease.”

“Paul is very articulate, poised and able to adjust his style and methods of presentation to both his audience and for the specific purpose of the communication.”

“Billy is a very effective communicator. He speaks with clarity, maturity, and decisiveness. He is a ‘straight shooter’ who has learned tact.”

“Brian’s outstanding intellectual skills are matched by his written and oral communication abilities. Brian is one of the finest technical writers I have ever encountered. He has a style that is engaging without sacrificing scientific accuracy. His paper on the Diels-Alder reaction was clearly the best in the organic chemistry class. Brian did far more research than anyone else and effectively conveyed the

mechanism and synthetic aspects of this reaction. His oral presentation was similarly excellent. Brian is a poised speaker with a thorough understanding of how to use visual aids and how to pitch his talk to the level of his audience.”

Weaknesses (*exhibits behaviors that distract from interpersonal relations: extreme shyness, inability to sustain conversation, poor eye contact*):

“He is quiet and not at all outgoing. He is not easy to talk with and usually does not say much”.

“He is rather self-centered, if not boastful. His behaviors may range from too much confidence to approval seeking.”

“He was a good student, but what struck me the most was his unwillingness (inability?) to speak up in class. I always had the impression that he did not want to be in class. Even in lab he was quiet, although his lab partner was quite friendly and outgoing.”

Service To Others

Strengths (*demonstration of altruistic behaviors toward others*):

“Mary has a long history of volunteer work dating back to junior high school. Her dedication to service has only increased during her college years. Although Mary has participated in a wide variety of campus activities, the most important to her has been tutoring three afternoons a week at an inner-city middle school. She has been tutoring for the past two years and will continue throughout her senior year.”

“She is a mover and a shaker and gets things done. Last year she was in charge of the Humane Society and conducted a dog/cat food drive on campus and also worked with their employees to bring animals to campus for several hours.”

“Being a cook at the Union Mission every Friday night and Saturday morning has been an important part of Bob’s college life. As far as I know, he has not missed this weekend activity for the past two academic years. He certainly is enthusiastic about this activity and looks forward to creating new recipes during his senior year.”

“Hospital volunteer work has been a big part of Michelle’s college career. She spends six hours a week reading stories to patients or helping children with homework assignments at the children’s hospital.”

Weaknesses (*lack of altruistic activity*):

“Bob has not been heavily involved in volunteer activities during the school year. Most of his out of class time has been involved with his fraternity, in which he holds an elected office, and intramural sports.”

“Working to complete and honors thesis in molecular biology has consumed the majority of Sam’s out of classroom time. Because of his strong dedication to his research project, he has not been as involved in volunteer service projects as most of our other premed students. I do not see this as a weakness but rather a reflection of his interest.”

“Mr. Smith seems to have a weakness in demonstrated service to others. Although he has done some volunteer work at a VA hospital in his hometown, he has created the impression that he did not know what medical school is all about.”

Problem Solving Ability

Strengths (ability to approach problems in calculated manner):

“She has outstanding intellectual ability and her analytical skills are superb. Although she has double majored in engineering and math, she has used elective time effectively to pursue humanity courses in the College of Arts and Science.”

“The thing I found most refreshing about Mary is that she took full responsibility for her initial shortcomings and took the appropriate steps to overcome them. We had the typical 'I bombed your first exam, but want to know how to improve' conversation. The difference between Mary and most students with which I have that conversation is that Mary took my advice to heart and made the appropriate adjustments in her study habits. She showed up regularly at my office hours and came prepared with questions. She also asked for additional problems to make sure she was ready for the exams. She demonstrated the kind of resolve she will need to succeed in medical school.”

“Not only did Dan answer the vast majority of questions on every exam correctly, he did so incredibly clearly and succinctly, as if he had mulled over the question for hours and drafted the best response possible.”

“Before the research started I thought that I would have to spend a lot of time in the lab with Matt to make sure he was doing things correctly. It quickly became evident that he was able to work independently and make excellent decisions about the direction of the research. By the end of the summer Matt was in complete control of the research and already formulating future projects.”

Weaknesses (muddled thinking):

“In looking over her academic record, I feel a bit insecure with her ability to handle the rigors of medical school. Judging from her performance in my class, she seems to be able to memorize but cannot apply knowledge to new problems when taken out of context.”

“As a first term sophomore, Anne enrolled in my Human Animal class and earned a C+. Although she did write a very good disease paper for the class, her overall exam performance was consistently in the 'C' range. Her final exam actually fell into the 'D' range. Of the 30 students enrolled in this particular section of the course, I know that at least 6 of them are currently in medical school. Of these six, two earned a B+, two earned an A- and two earned an A. Anne's C+ seems especially uncompetitive given this comparison.”

“Sarah's academic performance in her other upper level science classes has been mediocre. It appears that Sarah was well-prepared as a freshman, but has faltered somewhat in the more advanced classes.”

“Lisa was able to grasp general concepts, but she had difficulty seeing the connections between the concepts and solving problems using them. She always gave the impression that she understood everything, but she never backed it up on exams. She never took my advice for improving her grade.”

Exposure To The Profession

Strengths (knowledge of and experience in the medical profession):

“Together with his work as an emergency medical technician at the university emergency department, Steve has had outstanding exposure to the field of medicine, including extensive patient contact. Steve has drawn blood, performed CPR, applied slings and casts, and taken vitals – experiences well beyond those of our typical premed students. I rate his sincerity of interest in and knowledge of medicine as truly superior.”

“As far as knowledge of the medical field, Joe has more experience than almost every other applicant I have encountered in my 10 years here. He worked for a year as a unit secretary at the university hospital and then six months after that as an emergency medical technician. He also did a six-week internship in a stroke rehabilitation clinic. He earned his EMT license while carrying a full course-load and playing soccer. Clearly his time-management skills are exceptional. When I have heard Joe speak about his experiences as an EMT, I have noted that he has a firm understanding of many different aspects of the medical profession. His sense of compassion and empathy are very strong. He has enjoyed the challenge of being part of a medical team and I know he is looking forward to leading that team when he becomes a physician.”

“While he was in France, Tony fell ill (as most students in this age group do after their week-long break from class) and we took him to see a French physician. Tony spent his time in the office comparing the facilities, the doctor's approach, and procedures to those that he had seen in the United States. Despite his weakened state caused by an advanced sinus infection, he nevertheless found the strength to ask his physician numerous questions about the profession and then to analyze the cultural differences between the two countries and their methods.”

“I met Rob when he was a prospective student on his first visit to our institution. He was interested in medicine so I asked him why he wanted to become a physician. Most high school students give very poor answers to that question, mostly due to immaturity and a lack of real knowledge. Rob, however, gave the best answer I had ever heard from a high school student. He was able to articulate motivation to become a physician based on a combination of experiences as a lifeguard and the scientific research he had done at the university cancer center.”

Weaknesses (lack of insight into the lives and responsibilities of physicians and/or the health care system):

“Although both of her parents are physicians, she has not been involved in any activity to gain additional exposure to the field of medicine. She has worked in her parent's office during the summer months, mostly doing clerical work.”

“In our interview with him we found that he lacked the warmth that characterizes the majority of our applicants. He had some difficulty conveying to us his reasons for becoming a physician. This summer he will volunteer in a hospital which may give him greater insights to his goal as well as exposing him to a service role that he has lacked.”

“Her interview with us was poor because she could not articulate good answers, nor was she able to explain her motivation for becoming a physician. She must put herself in a position where she can discover her reasons for wanting to become a physician.”

“Although I think she could successfully complete medical school, I feel that Ann is taken by the glamour of becoming a doctor — I really doubt that she fully appreciates the amount of work and dedication it will take to get there.”

Common Sense And Judgment

Strengths (level-headed practicality in decision-making):

“Her good common sense and fine judgment are beyond expectations for some one at this stage of intellectual development. Exceptionally mature, quietly self-confident but strong and decisive.”

“Very practical and down to earth. She uses good judgment and has no problems making decisions.”

“I was tremendously impressed at how he handled the aftermath to his horrible injury. David never blamed the quality of health care that he received and maintained his poise and good humor throughout his long hospital stays. He never asked for special accommodations from his professors and never pitied himself.”

“He is the most sought-after chemistry laboratory assistant because of his patience, his responsible attitude, and his communication skills.”

Weaknesses (Lack of ability to make day-to-day decisions):

“Tim does not seem to be decisive; he occasionally needs reassurance.”

“Sarah seeks advice when she feels she needs it, and takes it into consideration when making decisions. She is a very practical young woman but is sometimes hesitant in making hard decisions.”

“Bob’s record shows that he has made some inappropriate social decisions. He could be one of our very best students, but right now he is underachieving.”

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What's It Like to... Participate in Multiple Mini Interviews (MMIs)?

What is a Multiple Mini Interview or MMI?

The Multiple Mini Interview (MMI), developed by McMaster University, is an interview format that gauges an applicant's potential to successfully interact with patients and colleagues. The MMI is designed to measure communication skills, specifically verbal and nonverbal skills that cannot be measured using standardized written exams or by reviewing coursework transcripts. The MMI typically consists of six to 10 very short interviews that revolve around a specific scenario. (See examples of possible scenarios on next page.)

Why are admissions committees moving towards this format?

Based on the research, schools using the MMI format believe it produces a more reliable assessment of a candidate and limits interview biases due to the number of interactions. Because students interact with multiple interviewers in multiple assessments over the course of the MMI, opinions of a single interviewer are not over-emphasized. The MMI allows applicants multiple opportunities to showcase their skills throughout the interview, unlike the traditional one-on-one interview.

What is the format? How long does it take?

Typically, a series of six to 10 "mini" interviews is conducted over a period of nearly two hours. Each mini interview includes a two-minute prep period before engaging in a conversation that lasts between five to eight minutes. "The MMI benefits students in many ways that perhaps other formats do not. Not only does the student know the topic that will be discussed, but also has time to prepare a response before walking into the room, unlike other formats wherein questions can be asked on the spot from any subject area. Additionally, the student has the unique opportunity to make multiple first-time impressions. If one question is tough and the student does not feel he/she performed well, the next room is a new chance to do better without any previous bias," says Tara K. Cunningham, Ed.D., assistant dean of admissions and recruitment at the University of Arizona (UA) College of Medicine – Phoenix. An applicant who completed the MMI at the College of Medicine echoed Dr. Cunningham's belief saying, "I can definitely see the benefit of this format, as I feel some of my stations went very well and others did not, and it was nice to get a fresh start at each station."



What kind of topics are covered in the MMI?

As with any interview, the MMI is designed to assess communication skills as well as provide additional information that is helpful in assessing a student's readiness for medicine. According to Stephen Manual, Ph.D., assistant dean of admissions at the University of Cincinnati College of Medicine, "The MMI scenarios also are developed to assess a candidate's skill and proficiency in areas such as problem solving, logical thinking, interpersonal skills, and ethical judgment. For example, one scenario may ask a candidate to describe what they would do if they learned that a physician was giving patients placebos instead of actual medications. There are also scenarios that involve teamwork and assess the ability to work with a partner to solve a problem. Communication skills also can be assessed through scenarios where actors pose as patients." An applicant at the UA College of Medicine – Phoenix said, "I felt like the MMI allowed me to act for the first time in an interview as a genuine person. Not only does this format allow for such a wide range of skills to be assessed (communication, problem solving, etc.), it does it in such a way to make the entire process informal enough to personally interact with the interviewers. It gave me a chance to work with other applicants to solve ridiculous tasks. I truly enjoyed myself because I know that I was able to give every interviewer a glimpse of my personality as to the type of doctor I will be."

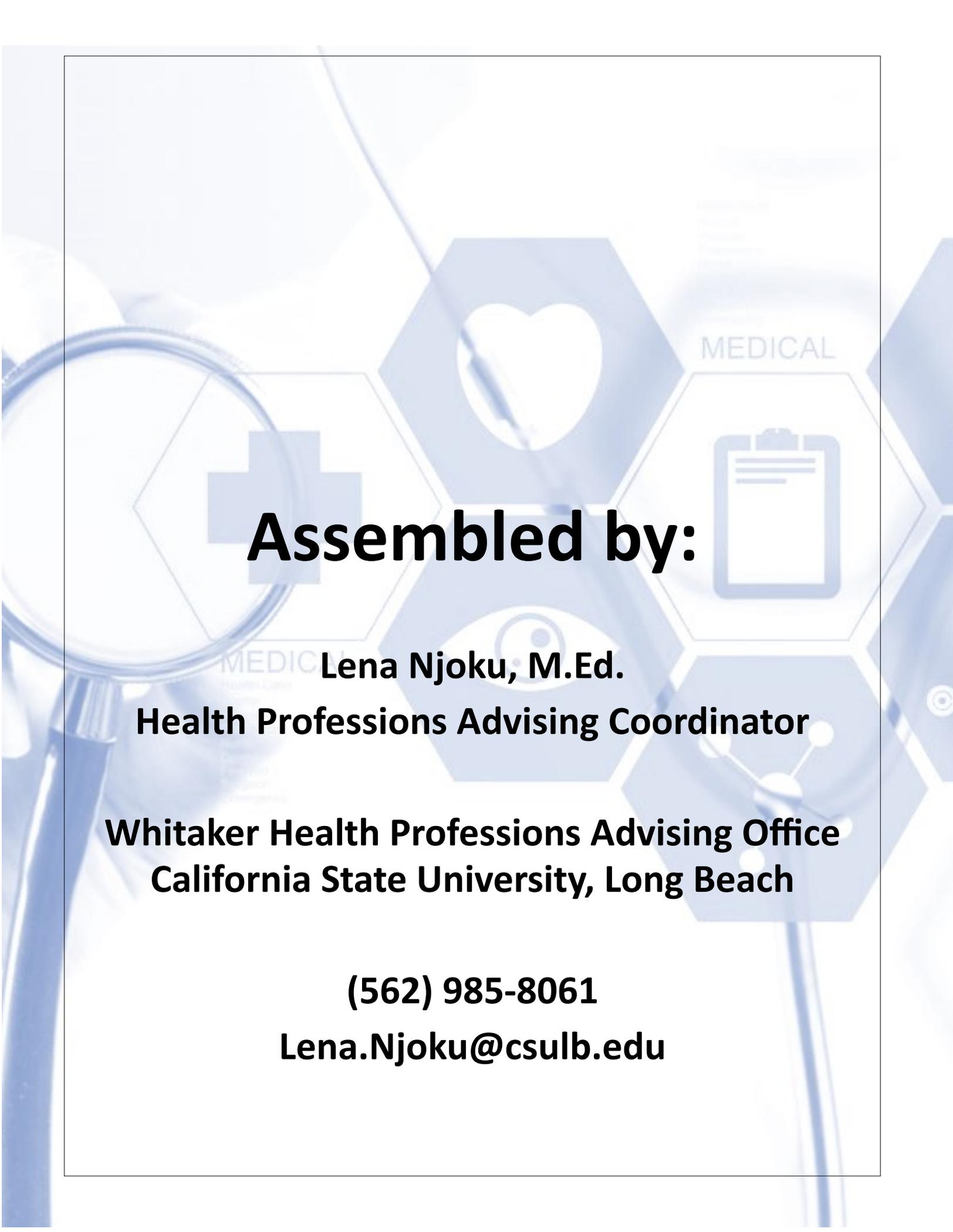
What is the best way to prepare for the MMI?

The MMI does not test specific knowledge. The format is designed to allow candidates to showcase their communication, interpersonal, and critical thinking skills. The best way to prepare is to practice expressing yourself articulately and logically in a timed environment.

According to an applicant who completed the MMI during the 2013 admissions season at UA College of Medicine, "I felt like the MMI allowed the interviewers to get responses that couldn't be so easily prepared for in advance, thus giving them a very realistic picture of the applicant and enabling them to make better decisions. I felt prepared to show who I am in everyday life!"

Possible interview scenarios:

- Scenarios involving interactions with an actor
- An essay writing station; this station may be take longer than the others
- A standard interview station
- A teamwork station where candidates must work together to complete a task
- An ethical scenario involving questions about social and policy implications
- A "rest" station to help students catch their breath and relax



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