

2012-2013 PRE-HEALTH STUDENT GUIDE



THE UNIVERSITY OF
MEMPHIS[®]
College of Arts and Sciences

Greetings from the Pre-Professional Advisor

Welcome to Pre-Health Advising at The University of Memphis! I look forward to working with you throughout your collegiate career as you prepare for the next step on your journey to entering the health profession. This guide was designed to provide you with an overview of the resources available at The University of Memphis, as well as outline the various aspects involved in pursuing a career in one of the health professions.

My role as the Pre-Professional Advisor is to serve as a resource for you! Please know that it is never too early to meet with me to start discussing your plans and developing a timeline for completing your coursework and applying to professional school. I am available to help you determine whether a career in one of the health professions is a good fit for you based on your skills, interests, and academic performance.

Your first step as a pre-health student should be to sign up for our listserv. Doing so will enable you to receive current information about pre-health events, volunteer and employment opportunities, and important dates and deadlines. Numerous health-related events are held each year including an information fair with admissions officials and tours of local professional schools.

Join the Pre-Health Listserv by emailing listserv@listserv.memphis.edu and typing **Subscribe Pre-Health-L** in the body of the email. Make sure you do not include anything else in the body of the email!

By now, you are probably wondering how you can guarantee admission to professional school and the short answer is, unfortunately, you cannot. There is no magic formula to guarantee admission to any professional school. However, there are many things you can do at the undergraduate level to present yourself as a competitive applicant to these schools. You should successfully complete the required coursework and spend significant time preparing for the required admissions exam (DAT, MCAT, OAT, PCAT, or GRE). You should participate in student organizations and seek shadowing and clinical experiences in the health profession you intend to pursue. Developing strong relationships with your faculty members and professionals you interact with during your shadowing and volunteering will provide you with a wide array of people you can enlist to write recommendation letters on your behalf. You will need to strengthen your interviewing and writing skills and make sure you can clearly articulate, on paper and in person, your motivation for pursuing this profession. You should do research on both the profession of your choice and the schools where you are seeking admission.

Use the resources available to you, including Pre-Professional Advising, to help you stay on track. I look forward to meeting with you soon!

Best wishes,

Jessica Clifford Kelso
Pre-Professional Advisor

PRE-HEALTH ADVISING

Pre-Health Student Guide

The Pre-Health Student Guide was designed for current and prospective University of Memphis students interested in pursuing a professional career in the health sciences. Since many U of M students attend professional schools in the Memphis area, emphasis is given to local schools and their requirements. Prerequisite coursework listings for various healthcare programs can be found at the end of this guide.

Pre-Professional Advising

Jessica Clifford Kelso, Pre-Professional Advisor

Location: 107 Scates Hall

Phone: 901-678-5454

Email: jessica.kelso@memphis.edu

Website: http://www.memphis.edu/cas/pre_health.htm

Advising Hours: Appointments are typically available Monday through Friday (9-3:30). I am always happy to meet with student individually to answer questions related to any area in pre-health (with the exception of nursing). Students can schedule an appointment by calling the number above. Walk-in appointments are rarely accommodated.

Pre-Professional Advising Services

- Provide individual and group advising for students preparing for careers in the health professions including advice on completing prerequisites, student involvement, gaining experience through shadowing and volunteer work, etc.
- Help navigate the application process for professional school including overseeing the pre-professional committee letter process for medical school applicants.
- Maintain information about various health professions including school information. Information is available in the lobby of 107 Scates Hall for student review at any time.
- Offer workshops through the year on various topics related to healthcare and the application process including personal statements, application process, four year timelines, etc.
- Discuss parallel plans if admission to professional school is unsuccessful.

Student Responsibilities

- Join the Pre-Health Listserv by emailing listserv@listserv.memphis.edu and typing **Subscribe Pre-Health-L** in the body of the email. Make sure you do not include anything else in the body of the email!
- Students are strongly encouraged to meet with the Pre-Professional Advisor early in their academic career to discuss their interest in healthcare and develop a timeline for application.
- Requirements may vary depending on the school(s) to which a student applies. Students must check with each individual school and ensure all requirements are met.
- Set realistic goals and develop a parallel plan for an alternate professional school or career if admission to first choice is not successful.

ACADEMIC PLANNING

Picking a Major

The U of M, like most universities, does not offer “pre-med” (or pre-dent, pre-pharmacy, etc.) as an actual major; rather, this is your career focus. The majority of professional programs require or strongly encourage the completion of an undergraduate degree, although no one single major is preferred. Although many pre-health students major in biology or chemistry, it is becoming increasingly common for students to major in a non-science field and seek (and gain!) admission to professional school. A popular choice of major among “pre-pt” students is Health and Human Performance with a concentration in Exercise and Sport Sciences (EXSS) offered by The College of Education, Health and Human Sciences (<http://www.memphis.edu/hss/exss/>).

Ultimately it is up to you-choose a major you are interested in and do well in that major while completing prerequisite courses needed for admission to the professional schools of your choice. Consider the options your major provides after graduation if you are not admitted to a health professions program. You should research alternate plans related to your chosen major.

Regardless of the major, students admitted to professional school excel academically, including in the prerequisite science courses, earn competitive entrance exam scores, and are well-rounded. For a complete listing of undergraduate programs at The U of M visit: <http://www.memphis.edu/majors/ugmajors.htm>.

You will be advised in the department that houses your major but are encouraged to meet with the Pre-Professional Advisor at least once a year.

Plan Ahead

Once you have selected your major, you should map out your courses for the remainder of your college career. Although you will likely make some changes along the way, establishing a solid plan to complete your degree requirements, including general education requirements as well as professional school prerequisite courses, is crucial. Doing so helps you develop a challenging yet manageable course load and establishes expectations for your performance.

It is understood that you have more going on in your life than just class! Many students balance family and work responsibilities with homework, time in class, and student involvement. In addition, as a pre-professional student you are expected to gain experience through volunteering and shadowing. Just be aware that there are no substitutes for good grades when applying to professional school. Make sure you take on courses and experiences that you enjoy but that will also result in success while keeping in mind all of your responsibilities. Student involvement, volunteering, shadowing experience, work, etc. are all important aspects to a well-rounded applicant but should enhance rather than harm your GPA.

Pre-Health Prerequisite Courses

All health professions programs have a list of required courses students must complete prior to full admission. In many cases, these courses should be completed prior to taking the entrance exam for admission (i.e. the MCAT for medical school or the PCAT for pharmacy school). If you plan on graduating in four years and entering a health professions program immediately after graduation, you should complete all prerequisite courses by the end of your junior year.

While most MD programs all have the same prerequisite courses, many other programs, like Physical Therapy and Physician Assistant, will vary greatly from school to school. As always, you should do adequate research to ensure you are meeting the admission requirements for the schools you are applying to.

Academic Course Load

Professional schools need to know that you are able to successfully manage a heavy course load and maintain good grades. Most professional schools expect applicants to complete several semesters with 2-3 lab courses at the same time. You should also reconsider taking summer science courses if your sole goal is to lighten your semester course load. You can still take summer courses, but you want to make sure you have heavy science loads during the academic year as well.

Science vs. Non-Science Courses

If you are a science major, you are strongly encouraged to consider non-science electives related to your intended career. For students applying to medical school, this is especially important as the 2015 MCAT will require students to have a solid understanding of Psychological and Sociological concepts. Students planning to take the MCAT in January 2015 or beyond should complete General Psychology (PSYC 1030) and Introduction of Sociology (SOCI 1010). Additional courses to consider include Biomedical Ethics (PHIL 3514), Health Communication (COMM 4012), Medical Sociology (SOCI 4851), Health Systems (HADM 4101), and many other upper-division courses in Psychology, Sociology, and Anthropology.

Grades

To be a competitive applicant for professional school, strong academic performance is extremely important. While most professional schools specify a minimum grade point average, acceptance with only the minimum grade point average is highly unlikely due to the large number of qualified applicants. Make sure you review the admissions criteria for the schools you wish to attend as well as the median GPA and entrance exam scores for the most recently admitted class of students (this can be found in the entering class profile). This information should help you set goals for your academic performance and realistically assess your strength as an applicant. Pay close attention to both your overall GPA and your science GPA.

Generally speaking, professional schools:

- consider sciences credits three to five years old outdated.
- do not accept physical education activity courses, military sciences, applied art, and applied music courses as fulfillment of elective hours.
- require a grade of C or higher in all prerequisite courses.

It is also important to note that the grades you earn your first semester ARE important, they DO count, and professional schools WILL look at them. If you falter early on it is not the end of the world, but you want to avoid too many missteps that may harm your chances down the road.

Academic Resources & Stress Management

Preparing for professional school can be extremely stressful at times. The coursework is rigorous and in addition to your schoolwork, you need to find time to shadow, volunteer, and participate in other activities that will enhance your collegiate experience and application to professional school. If you are struggling in coursework, it is important to seek help early and often! Take advantage of your professors' office hours, as well as the many resources available to you on campus. Resources are also available to provide support if you are struggling with stress management.

- Education Support Programs: <http://www.memphis.edu/esp/index.php>, including English, Math, and Science Learning Centers.
- Chemistry Learning Center: http://www.chem.memphis.edu/undergrad/cclc_F12.htm
- Student Disability Services: <http://www.memphis.edu/sds/>
- Career and Psychological Testing Center: <http://www.memphis.edu/cpcc/psychological.php>
- Student Health Services: <http://saweb.memphis.edu/health/>
- Campus Recreation Intermural Services: <http://www.memphis.edu/cris/index.php>

Online Courses

In general, professional schools prefer that students gain in-class, hands-on experience offered by the traditional classroom setting and may not accept courses taken online as meeting admission requirements. This is particularly true in regards to science courses. To avoid potential problems, you should review the requirements of each professional school you plan to apply to as well as check with your advisor prior to enrolling in any online courses.

Prerequisite and Co-requisite Courses

Many courses, and in particular those in the fields of science and math, have prerequisite and/or co requisite courses. It is your responsibility to review this information and discuss prerequisite requirements and course sequencing with your advisor. You can review course descriptions and prerequisite information in the undergraduate catalog: <http://www.memphis.edu/ugcatalog/>. It is to your advantage to get started on math and science coursework as soon as possible to avoid running into delays scheduling courses down the road.

Withdrawing/Repeating Courses

Most professional schools take into account all grades earned including any repeated courses. This means that the professional school will consider both your old grade and new grade in your overall GPA calculation. While you will need to repeat any required coursework with a D or lower, repeating courses with a C or higher may be unnecessary. The Pre-Professional Advisor can assist you in making this determination. You should avoid withdrawals after the first week of class when possible. A pattern of withdrawals and repeated courses should be avoided as professional schools will view this with concern. Poor planning may end up costing you in terms of time, money, and lost opportunities.

GAINING EXPERIENCE

Why Should I Get Involved?

There are many elements involved in becoming a competitive candidate for professional school. In addition to superior grades and strong performance on the required entrance exam, work experience, community service, evidence of leadership ability, and clinical experiences in healthcare are important factors that enhance your chances for admission.

Everyone applying to professional school submits a personal statement, which gives you the chance to explain to the professional schools why you are pursuing a career in medicine, pharmacy, etc. However, you need to say more than simply "I've always wanted to be a doctor." Related volunteer, research, work, and shadowing experiences provide professional schools with concrete examples that you are dedicated, motivated, and have given significant thought to your career goals. It is important to note that the quality of the experiences is more important than the quantity and you should seek experiences that provide you with patient interaction in a variety of settings. However, your health-related experience should be thought of in terms of semesters and years rather than cramming everything into the semester right before you apply.

The key element to keep in mind when seeking experiences is that the time you are spending outside of class should be valuable and meaningful!

Shadowing

Shadowing is an excellent opportunity for you to experience a "typical day" for a professional in your field of interest. You will quickly discover that the healthcare industry is much different than what is depicted on Grey's Anatomy and House! Certain programs, including occupational therapy, physical therapy, osteopathic medicine, and physician assistant, all require shadowing as part of the application process and some programs mandate a minimum number of hours verified by the person(s) you are shadowing.

Keep in mind that the goal of shadowing is to expose you to all parts of the profession, not just the one particular area or specialty you are interested in. So, if you want to become a physical therapist working with sports injuries, in addition to shadowing in that area, you should also shadow in a nursing home and a pediatric rehabilitation facility. If you want to become a retail pharmacist, you should also seek shadowing experience with a clinical pharmacist to truly understand the differences between the two.

U of M Student Organizations

There are over 200 Registered Student Organizations at The University of Memphis including three specifically for pre-health students:

- Alpha Epsilon Delta National Pre-Professional Honor Society (AED)
- Pre-Dental Society
- Minority Association for Pre-Medical Students (MAPS)

Meeting dates and times for these groups are updated monthly on the pre-health calendar of events:
<http://www.memphis.edu/cas/pre-health-events.htm>.

Contact information for each group can be found in the Registered Student Organization database:
<https://saweb.memphis.edu/rsoreg/RSOList.asp>.

Get involved in RSOs and other organizations early in your academic career so you have time develop relationships with other members and the group's faculty advisor. Attend meetings on a regular basis and take advantage of the guest speakers, volunteer opportunities, mentoring partnerships, and other benefits that come from membership in these groups.

Leadership

Involvement in student organizations is great but holding a leadership positions in those organizations is even better! Professional schools would rather see you hold a leadership position in one or two organizations than be a semi-regular member of seven or eight. Leadership positions show professional schools that you are not only capable of making decisions and leading others, but that you can also work well with others as part of a team.

Volunteering

The majority of students list helping others as a driving force for pursuing a career in healthcare. Volunteering is a way to demonstrate your commitment to serve others and professional schools want to see your commitment over time and on a regular basis. Volunteers are always needed and there is no shortage of healthcare facilities in Memphis for you to gain experience. It may be to your benefit to contact and visit several places to ensure you find one that best meets your needs as a pre-health student. Consider nursing homes, hospice, crisis centers, tutoring/mentoring at risk children, and programs that serve the homeless, and those living with HIV/AIDS. Be mindful that volunteering does not necessarily need to take place in the hospital setting. You may find the following website helpful in getting started: <http://www.volunteermidsouth.org/>.

Health-Related Employment

While not required, this is a great way to gain experience while getting paid! Although this can be difficult experience to get, we have had students work as clinical assistants, emergency department scribes, EMTs, optometry assistants, and pharmacy technicians. Employment announcements are sent out via the Pre-Health Listserv.

Research

Research experience is valuable for many reasons. Involvement in research introduces you to new information, laboratory techniques, experimental design, and data analysis. It provides an arena for you to develop and strengthen your critical thinking skills and build effective communication skills while working with a research team. You may even be included as a co-author in a publication! Research at the undergraduate level is imperative if you plan to pursue admission for a dual degree (MD/PhD) or aim to have a career in medical research. Research can add to your overall competitiveness as an applicant and gives you an additional source for seeking recommendation letters. Speak with faculty in the field you are interested in to see what research opportunities may be available to you. As admission to health professions programs becomes more and more competitive, research can be another way for you to stand out in a sea of qualified applicants.

Professionalism

As previously discussed, the academic choices you make in college can have lasting effects on your application to professional school. The same is true for the choices you make outside of the classroom. Strive to make choices now that you would be proud to explain to an admission committee during an interview. It is important to develop good habits early on that will serve you well as you progress in your academic career and enter the professional world.

While you are likely aware of the importance of dressing professionally when going for an interview, it is also important to dress appropriately when shadowing and gaining other clinical experience. Typically, business casual is acceptable for shadowing. Be aware of the message you are sending to the world via cyberspace on Facebook, Twitter, etc. Review not only your own Facebook posts but also what other people are posting to your account, as well as pictures you are tagged in. When communicating with professors, healthcare professionals, and admissions staff, do so using appropriate contact information. Your University of Memphis email is your best bet but if you prefer to use something else a simple email address, such as john_doe@gmail.com, is best. Your outgoing voicemail message should be clear and void of any background noise. When leaving voicemail messages for others, make sure you speak clearly and leave your name and telephone number at both the beginning and end of the message.

Remember, you never get a second chance to make a first impression!

APPLICANT INFORMATION

Applying to Professional School

It cannot be stated often enough: it is your responsibility to become familiar with all requirements and steps necessary for a competitive and complete application to professional school(s) of your choice! For the majority of professional programs, applicants traditionally apply during the summer prior to their final year as an undergraduate. This may vary depending on your program and school of interest.

Know When to Apply

The majority of students will apply to professional school after their third year of undergrad. However, this is not the timeline for everyone, so it is important to meet with the Pre-Professional Advisor on a regular basis to develop a timeline to follow. You want to make sure you are applying when you are most competitive and are presenting yourself in the best possible light. For some students, applying after graduation is a better option. Once you are ready to apply, it is crucial for you to begin the application process as soon as possible. There are many elements to completing your application and leaving things to the last minute greatly decreases your chances for admission. This is particularly true for schools who utilize a rolling admissions process.

The Application

Centralized application services exist for dentistry, medicine, occupational therapy, optometry, pharmacy, physical therapy, physician assistant, podiatry, and veterinary medicine. You must check with the school(s) you are applying to, though, as not all schools use these centralized services. In most cases, an application fee must accompany the application in order for it to be processed and considered by the professional school. Once you have begun the application process, it is your responsibility to ensure that the admissions application is complete and that the professional school has received all required documents.

- Dentistry: <https://portal.aadsasweb.org/>
- Medicine: <http://www.aamc.org/audienceamcas.htm>
- Occupational Therapy: <https://portal.otcas.org/>
- Optometry: <http://www.optomcas.org/>
- Osteopathic Medicine: <https://aacomas.aacom.org/>
- Pharmacy: <http://www.pharmcas.org/>
- Physical Therapy: <http://www.ptcas.org/>
- Physician Assistant: <https://portal.caspaonline.org/>
- Podiatry: <http://www.e-aacpmas.org/>
- Veterinary Medicine: <http://www.aavmc.org/vmcas/vmcas.htm>

National Entrance Exams

Applicants to most professional schools are required to submit scores from specific entrance tests. It is important that you never take the test as a "trial run" as every attempt on the test is reported to the school(s)/program(s) to which you apply. Adequate preparation minimizes the risk of having an unsatisfactory score play a role in the equation. Students should take multiple timed practice tests prior to sitting for the official exam. There are a number of companies that offer test prep including Kaplan, ExamCrackers, and Princeton Review as well as various printed study materials. The University of Memphis does not suggest any one particular method of test preparation over another and encourages students to research all options and devise a study plan that works best for each individual.

- DAT (Dentistry): <http://www.ada.org/dat.aspx>
All US dental schools require this exam. You should complete general biology, general chemistry, and the organic chemistry sequence prior to taking this exam. It is offered year-round.

- MCAT (Medicine): <http://www.aamc.org/students/mcat/start.htm>
Medical school applicants should pay close attention to upcoming changes in the MCAT; this exam will be reformatted beginning in January 2015. All US allopathic and osteopathic medical schools require this exam. You should complete general biology, general chemistry, the organic chemistry sequence, and general physics prior to taking this exam. Students taking the MCAT beginning in January 2015 will also need to take introductory courses in sociology and psychology. Knowledge of biochemistry and an understanding of statistics will also be required. The MCAT is offered primarily April through September.
- OAT (Optometry): <https://www.ada.org/oat/index.html>
All US Optometry schools require the OAT. You should complete general biology, general chemistry, the organic chemistry sequence, and general physics prior to taking this exam. It is offered year-round.
- PCAT (Pharmacy): <http://pcatweb.info/>
All US Pharmacy schools require the PCAT. You should complete general biology, general chemistry, and the organic chemistry sequence prior to taking this exam. It is typically offered three months each year, in July, September, and January.
- GRE (Professional schools vary; typically required for Occupational Therapy, Physical Therapy, Physician Assistant, and Veterinary Medicine): <http://www.ets.org/gre>
Unlike the other exams listed, the GRE is not content specific, therefore no prerequisite courses are needed prior to taking the exam. The test has three sections: Verbal Reasoning, Quantitative Reasoning, and Analytical Writing and is offered year-round.

Pre-Medical Committee Letter

The University of Memphis has a pre-med committee which evaluates students applying to medical school and authors a committee letter on their behalf. This committee is made up of variety of U of M faculty members and the Pre-Professional Advisor. Currently, all US medical schools accept committee letters. Workshops are held in February of each year to discuss the committee letter process. Attendance is mandatory for students wishing to seek a committee letter for the upcoming admissions cycle. For example, students who wish to begin medical school in 2014 must attend a workshop held in February 2013 and meet established deadlines in order to obtain a committee letter.

Letters of Recommendation

Letters of recommendation are an important aspect of the application process to all professional schools. In addition to letters from faculty, some professional schools may require letters of recommendation from practitioners in the field to which the student is applying. Potential letter writers include:

- Professors in your major
- Professors who have supervised research you have been involved in (Remember, if you are applying to MD/PhD programs you should have at least two letters related to your research)
- Professors from classes you have enjoyed and been successful in
- Dentists, doctors, physician assistants, physical therapists, etc.

Always make sure you ask for letters of recommendation well ahead of deadlines. Providing your letter writer with a copy of your resume and personal statement is common practice. You should approach every class and experience with the intent to seek a letter of recommendation from that faculty member, supervisor, physician, etc. To that end, get to know your professors. Take advantage of office hours, sit in the front, and ask questions; in short, be an active learner. Strong letters of recommendation come from faculty members who know more about you than just your final grade!

Letter of Good Standing

Committee letters are only available to students who have completed a minimum of 30 credit hours at The University of Memphis. If you have not earned 30 hours at the time of your application to medical school, the Pre-Professional Advisor is happy to supply a letter of good standing to the medical schools on your behalf.

Personal Statement

Most professional schools require submission of a personal statement with the application. Many applicants are academically similar so the personal statement is an opportunity for you to stand out by highlighting your abilities and clarify areas that were not otherwise addressed in the application. The personal statement should demonstrate your communication skills with the goal of generating enthusiasm and excitement about you as an applicant. Your statement also shows professional schools that you can “follow directions” by addressing the questions asked in the writing prompt. The Pre-Professional Advisor has sample essays available for your review in addition to holding several personal statement workshops each spring.

Since you are typically submitting your personal statement via a centralized application server, it is not school specific. For example, you should not highlight your desire to attend The University of Tennessee College of Medicine in your personal statement since all medical schools will receive the same essay.

Secondary Applications

Many professional schools (and almost all medical schools) require a secondary application that is sent directly to you after receipt of your primary application. It is at this stage that each school has its own procedures and processes for reviewing applications and scheduling interviews, so there is no set timeline. Some schools will contact all applicants automatically (meaning you may or may not have passed preliminary screening) while others are more selective in whom they invite to complete secondary applications. You should work on completing your secondary applications as quickly as possible so that your application can move ahead to the next step of the process. Some schools will require additional essays with more specific prompts which may provide you with the opportunity to discuss your interest in that specific school.

Professional School Interview

A personal interview is an integral part of the admissions procedure at most professional schools. Interviewers look for indicators of motivation, maturity, commitment, and insight into the student’s chosen profession; the development and articulation of goals are two such indicators. It is important that you dress professionally and arrive promptly. Interviews can be an entire day of scheduled activities or simply an hour-long meeting. Interviewers can be faculty, students, admissions officials, and alumni. Your interviewer may or may not have access to your application file but it is important to be ready to discuss every aspect of it regardless. You must be prepared to talk about your entrance exam score, transcript, shadowing, student involvement, research, employment, and anything else you included in your application.

PRE-HEALTH RESOURCES

Websites

Additional resources available in 107 Scates Hall and on the pre-health website:

http://www.memphis.edu/cas/pre_health.htm.

Pre-Health Career Exploration

- Explore Health Careers: <http://www.explorehealthcareers.com>
- Aspiring Docs: <http://www.aspiringdocs.org/>
- Best of the Web: <http://botw.org/top/Health/>
- Student Doctor Network: www.studentdoctor.net
- Therapy Job Zone (exploring PT, OT, Speech Therapy): www.therapyjobszone.com
- Occupational Outlook Handbook: www.bls.gov/oco/

Professional Associations

- ADEA (American Dental Education Association): <http://www.adea.org>
- AAMC: Association of Medical Colleges: <http://www.aamc.org/students/start.htm>
- ASCO (Association of Schools and Colleges of Optometry): <http://www.opted.org>
- AACOM (American Association of Colleges of Osteopathic Medicine): <http://www.aacom.org/>
- AACP (American Association of Colleges of Pharmacy): <http://www.aacp.org/>
- APTA (American Physical Therapy Association): <http://www.apta.org>
- AVMA (American Veterinary Medicine Association): <http://www.avma.org/>
- AAPA (American Association of Physician Assistants):
<http://www.aapa.org/education-and-certification/physician-assistant-programs>
- APMA (American Podiatric Medical Association) :
<http://www.apma.org/Members/Education/PodiatricMedicalColleges.aspx>

Programs for Minority and Underrepresented Populations

- AAMC Diversity Initiatives: <https://www.aamc.org/initiatives/diversity>
- Association of Minority Health Professions Schools, Inc.: <http://www.minorityhealth.org/>
- Student National Pharmaceutical Association: <http://www.snpha.org/>
- Summer Medical and Dental Education Program: <http://www.smdep.org/>
- Tennessee Institute for Pre-Professionals (TIP): <http://www.uthsu.edu/tip/>

Chiropractic Medicine Requirements

- The practice of chiropractic medicine focuses on the relationship between structure, primarily of the spine, and function, as coordinated by the nervous system, and how that relationship affects the reservation and restoration of health.
- There is no particular major required to enter chiropractic training although a strong background in science is highly recommended. It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Completion of a bachelor's degree is strongly encouraged. No entrance exam is required.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	Actual minimum semester hours required by all Chiropractic Colleges
General Biology	BIOL 1110/1111 BIOL 1120/1121	8
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8
Organic Chemistry	CHEM 3310/3301 CHEM 3511/3501	8
General Physics	PHYS 2010/2011 PHYS 2020/2021	8
English Composition	ENGL 1010 ENGL 1020	6
Psychology	PSYC 1030	3
Social Sciences and Humanities	Courses in ANTH, ECON, HIST, POLS, PSYC, SOCI, ART, ENGL, MUS, PHIL, RLGN, and Foreign Languages	15

Cytotechnology Requirements

University of Tennessee Health Science Center

- Cytopathologists and histotechnologists are highly skilled laboratory professionals who prepare and process tissue and cellular material for evaluation, as well as examine body tissue cells microscopically in order to identify abnormalities.
- The University of Tennessee Health Science Center offers a 3+2 program that leads to a Master in Cytopathology Practice. Although the program at UTHSC admits applicants who have completed a minimum of 85 semester hours, students are strongly encouraged to complete a baccalaureate degree with a major in biology first.
- It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	# of hours required by University of Tennessee Health Science Center
General Biology	BIOL 1110/1111 BIOL 1120/1121	8
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8
Math	MATH 1710 or higher	3
English Composition	ENGL 1010 ENGL 1020	6
English Literature	ENGL 2201 or 2202	3
Social Science Electives	See Advisor for options	12
Upper-Division Biology	See options below for recommendations; any UD BIOL will suffice	15 minimum
Immunology	BIOL 4445	Recommended
Histology	BIOL 4380	Recommended
Cell Biology	BIOL 3130	Recommended
Genetics	BIOL 3072/3073	Recommended
Comparative Anatomy	BIOL 3620	Recommended
Vertebrate Physiology	BIOL 3730	Recommended
Electives	See Advisor for options	Varies*

*Applicants must complete a minimum of 85 semester hours. At least 16 hours of the minimum 85 must be upper-division.

Dental Hygiene Requirements

University of Tennessee Health Science Center

- The Dental Hygiene program offered by The University of Tennessee Health Science Center is a baccalaureate program. Students completing prerequisite courses at The University of Memphis may enter the U of M as undecided or select one of our undergraduate majors.
- It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	# of hours required by University of Tennessee Health Science Center
Anatomy & Physiology	BIOL 2010/2011 BIOL 2020/2021	8
General Biology	BIOL 1110/1111	4
Microbiology	BIOL 1230/1231	4
General Chemistry	CHEM 1110/1111 CHEM 1120/1121 OR CHEM 1010/1011 CHEM 1020/1021	8
English Composition	ENGL 1010 ENGL 1020	6
English Literature	ENGL 2201 or ENGL 2202	3
Communication	COMM 2381	3
Nutrition	NUTR 2202	3
Social Science Electives	See Advisor for options	12 (at least 3 hours in PSYC and 3 hours in SOCI)
Electives	See Advisor for options	7 hours needed to reach 58 total semester hours

Dentistry Requirements

University of Tennessee Health Science Center

- The University of Tennessee College of Dentistry admits one class per year beginning in August. The program is four years and length and leads to the Doctor of Dental Surgery (D.D.S.) degree.
- There is no particular major required for admission to dental school although a strong background in science is highly recommended. It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Completion of a baccalaureate degree and the DAT (Dental Admissions Test) is required for admission
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	# of hours required by University of Tennessee Health Science Center
General Biology	BIOL 1110/1111 BIOL 1120/1121	8
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8
Organic Chemistry	CHEM 3310/3301 CHEM 3511/3501	8
Biochemistry	CHEM 4511	3
General Physics	PHYS 2010/2011 PHYS 2020/2021	8
Select one: Microbiology Comparative Anatomy Histology	BIOL 3500/3505 BIOL 3620 BIOL 4380	4
English Composition	ENGL 1010 ENGL 1020	6
Upper Division Biology	See Advisor for Options	Recommended

Health Informatics and Information Management Requirements

University of Tennessee Health Science Center

- “Health Informatics and Information Management professionals work in a variety of different settings and job titles. Having skilled HIM professionals on staff ensures an organization has the right information on hand when and where it is needed while maintaining the highest standards of data integrity, confidentiality, and security. They often serve in bridge roles, connecting clinical, operational, and administrative functions.” (AHIMA)
- The University of Tennessee Health Science Center’s program leads to a Master in Health Informatics and Information Management. Although this program admits students who have completed a minimum of 92 credit hours, we encourage students to complete a baccalaureate degree prior to entry.
- It is the applicant’s responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	# of hours required by University of Tennessee Health Science Center
Anatomy and Physiology	BIOL 2010/2011 BIOL 2020/2021	8
Medical Terminology	CLAS 3021	1-3 (an online course is acceptable)
Statistics	MATH 1530	3
English Composition	ENGL 1010 ENGL 1020	6
English Literature	ENGL 2201 or 2202	3
Oral Communication	COMM 2381	3
Principles of Management	MGMT 3110	3
Personnel Administration/ Human Resources	MGMT 3215*	3
Management Information Systems	MIS 2749	3
Systems Analysis and Design	MIS 3770*	3
Database Management	MIS 3775*	3
Social Science Electives	See Advisor for options	6
Electives	See Advisor for options **	Need to earn a minimum of 92 total hours

* Contact Pre-Professional Advisor for information on obtaining permit.

** Suggested courses included: ACCT 2010, ACCT 2020, ACCT 3011, MIS 2770, MIS 4800, MGMT 3510, MGMT 4251, MGMT 4260, and MGMT 4420.

Medical Technology Requirements

University of Tennessee Health Science Center

- Medical Technologists are laboratory scientists who use a variety of sophisticated instruments to perform and evaluate various laboratory procedures, including tests on blood and body fluids to obtain data on which a diagnosis of health or disease is made and appropriate therapy initiated.
- The Medical Technology program offered by The University of Tennessee Health Science Center is designed as the third and fourth years of a baccalaureate degree program, although applicants who have completed their baccalaureate degree previously are encouraged to apply.
- It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	# of hours required by University of Tennessee Health Science Center
Anatomy & Physiology	BIOL 2010/2011	4
General Biology	BIOL 1110/1111 BIOL 1120/1121	8
Microbiology	BIOL 3500/3505	5
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	4
Organic Chemistry	CHEM 3310/3301 CHEM 3511/3501	8
College Algebra	Math 1710	3
English Composition	ENGL 1010 ENGL 1020	6
General Psychology	PSYC 1030	3
Electives	See Advisor for options	16 hours needed to reach 61 total semester hours

Allopathic Medicine Requirements

Including The University of Tennessee Health Science Center College of Medicine

- Graduates of allopathic medical schools earn an MD and are medical doctors.
- Tennessee has two public medical schools: East Tennessee State University's James H. Quillen College of Medicine in Johnson City and The University of Tennessee College of Medicine, located on the University of Tennessee Health Science Center in Memphis.
- Tennessee also has two private medical schools: Vanderbilt University School of Medicine and Meharry Medical College School of Medicine, both in Nashville.
- There is no particular major required for admission to allopathic medical school although a strong background in science is highly recommended. It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Completion of a baccalaureate degree and the MCAT (Medical College Admission Test) is required for admission.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	Minimum semester hours required by Colleges of Allopathic Medicine
General Biology	BIOL 1110/1111 BIOL 1120/1121	8
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8
Organic Chemistry	CHEM 3310/3301 CHEM 3511/3501	8
General Physics	PHYS 2010/2011 PHYS 2020/2021	8
English Composition	ENGL 1010 ENGL 1020	6
Biochemistry	CHEM 4511	Strongly Recommended for MCAT
General Psychology	PSYC 1030 (previously PSYC 1200)	Strongly Recommended for MCAT
Introduction to Sociology	SOCI 1010 (previously SOCI 1111)	Strongly Recommended for MCAT
Upper-Division Biology Courses	See Advisor for Options	Strongly Recommended

Osteopathic Medicine Requirements

- Osteopathic medicine provides all of the benefits of modern medicine including prescription drugs, surgery, and the use of technology to diagnose disease and evaluate injury. It also offers the added benefit of hands-on diagnosis and treatment through a system of therapy known as osteopathic manipulative medicine. Osteopathic medicine emphasizes helping each person achieve a high level of wellness by focusing on health promotion and disease prevention.
- Doctors of osteopathic medicine can choose any specialty, prescribe drugs, perform surgeries, and practice medicine anywhere in the United States.
- There is no particular major required for admission to allopathic medical school although a strong background in science is highly recommended. It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Completion of a baccalaureate degree and the MCAT (Medical College Admission Test) is required for admission.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	Minimum semester hours required by Colleges of Osteopathic Medicine
General Biology	BIOL 1110/1111 BIOL 1120/1121	8
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8
Organic Chemistry	CHEM 3310/3301 CHEM 3511/3501	8
General Physics	PHYS 2010/2011 PHYS 2020/2021	8
English Composition	ENGL 1010 ENGL 1020	6
Biochemistry	CHEM 4511	Strongly Recommended for MCAT
General Psychology	PSYC 1030 (previously PSYC 1200)	Strongly Recommended for MCAT
Introduction to Sociology	SOCI 1010 (previously SOCI 1111)	Strongly Recommended for MCAT
Upper-Division Biology Courses	See Advisor for Options	Strongly Recommended

Occupational Therapy Requirements

University of Tennessee Health Science Center

- Occupational Therapists utilize everyday activities (occupations) to help people of all ages develop skills and strategies to participate in the things they want and need to do in their everyday lives.
- There is no particular major required for occupational school although a strong background in science is highly recommended. It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Although the OT program offered by The University of Tennessee Health Science Center does not require completion of a baccalaureate degree, all other programs in TN do. The GRE (Graduate Record Exam) is required for admission to all programs.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	# of hours required by University of Tennessee Health Science Center
Anatomy & Physiology	BIOL 2010/2011 BIOL 2020/2021	8
General Biology	BIOL 1110/1111 BIOL 1120/1121	8
General Chemistry	CHEM 1110/1111	4
General Physics	PHYS 2010/2011	4
Statistics	EDPR 4541, ISDS 2710, MATH 1530, SOCI 3311, MATH 4611	3
General Psychology	PSYC 1030 (formerly 1200)	3
Human Growth and Development	EDPR 2111	3
Abnormal Psychology	PSYC 3102	3
General Sociology	SOCI 1010	3
Scientific Terminology	CLAS 3021	1-3 (an online course is acceptable)
English Composition	ENGL 1010 ENGL 1020	6
Communication	COMM 2381	3
Economics or Government	ECON 2010, ECON 2020, POLS 1030, POLS 1101, POLS 1102	3
Anthropology	ANTH 1200	3
Humanities	See Advisor for options	9
Electives	See Advisor for options	Need to earn a minimum of 90 total hours

Optometry Requirements

Southern College of Optometry

- "Doctors of optometry are independent primary health care providers who specialize in the examination, diagnosis, treatment and management of diseases and disorders of the visual system, the eye, and associated structures as well as the diagnosis of related systemic conditions." (definition adopted by the American Optometric Association)
- Completion of a bachelor's degree is strongly encouraged and the Optometry Admission Test (OAT) is required for admission.
- There is no particular major required to enter optometry training although a strong background in science is highly recommended. It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	# of hours required by Southern College of Optometry
General Biology	BIOL 1110/1111 BIOL 1120/1121	8
Microbiology	BIOL 1230/1231 or BIOL 3500/3505	4
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8
Organic Chemistry	CHEM 3310/3301 CHEM 3511/3501	8
Biochemistry	CHEM 4511	3
General Physics	PHYS 2010/2011 PHYS 2020/2021	8
Calculus	Math 1830 or Math 1910	3
Statistics	Math 1530, Math 4611, SOCI 3311, ISDS 2710, EDPR 4541	3
English Composition	ENGL 1010 ENGL 1020	6
General Psychology	PSYC 1030	3
Social Science Electives	See Advisor for options	6
Cell Biology	BIOL 3130	Recommended
Histology	BIOL 4380	Recommended
Comparative Anatomy	BIOL 3620	Recommended
Vertebrate Physiology	BIOL 3730	Recommended

Pharmacy Requirements

The University of Tennessee Health Science Center College of Pharmacy

- Pharmacy school is four years in length and upon graduation students earn a Pharm.D.
- There is no particular major required for admission to pharmacy school although a strong background in science is highly recommended. Students majoring in either biology or chemistry are able to complete the prerequisites coursework in a timely manner whereas a non-science major may take significantly longer to do so.
- It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Completion of minimum of 90 credit hours and the PCAT (Pharmacy College Admission Test) is required for admission.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	Minimum semester hours required by University of Tennessee College of Pharmacy
General Biology	BIOL 1110/1111 BIOL 1120/1121	8
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8
Organic Chemistry	CHEM 3310/3301 CHEM 3511/3501	8
General Physics	PHYS 2010/2011	4
Biochemistry	CHEM 4511 CHEM 4512	6
Immunology	BIOL 4445	3
Microbiology	BIOL 3500/3505	See Advisor if you have already completed a Microbiology course
Anatomy and Physiology	BIOL 2010/2011 and BIOL 2020/2021 OR BIOL 3620 and BIOL 3730	8
Calculus	MATH 1830 or MATH 1910	3
Statistics	MATH 4611, ISDS 2710, EDPR 4541, SOCI 3311	3
English Composition	ENGL 1010 ENGL 1020	6
Oral Communication	COMM 2381	3
Humanities Electives	See Advisor for Options	6
Social Science Electives	See Advisor for Options	6

Physical Therapy Requirements

University of Tennessee Health Science Center

- Physical Therapists work with patients of every age, assisting with the ability to move, reduce pain, restore function, and prevent disability.
- The University of Tennessee Health Science Center offers a three-year professional program. Graduates of this program are awarded the Doctor of Physical Therapy (DPT) degree.
- There is no particular major required for physical therapy although a strong background in science is highly recommended. It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Completion of a baccalaureate degree and the GRE (Graduate Record Exam) is required for admission to all programs.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	# of hours required by University of Tennessee Health Science Center
Anatomy & Physiology	BIOL 2010/2011 BIOL 2020/2021	8
General Biology	BIOL 1110/1111 BIOL 1120/1121	8
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8
General Physics	PHYS 2010/2011 PHYS 2020/2021	8
Statistics	EDPR 4541, MATH 1530, SOCI 3311, MATH 4611	3
Math	MATH 1710 or higher	3
General Psychology	PSYC 1030 (formerly 1200)	3
Human Growth and Development or Child Psychology	EDPR 2111 PSYC 3103	3
English Composition	ENGL 1010 ENGL 1020	6
Social Science/Humanities Electives	See Advisor for options	12

Physician Assistant Requirements (TN programs)

- Physician assistants, working under the supervision of a physician, perform many patient-related tasks traditionally done by physicians. PAs practice in all areas of medicine although the majority of PA programs train students for general medicine.
- There is no particular major required for physician assistant school although a strong background in science is highly recommended. It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Completion of a bachelor's degree and the GRE (Graduate Record Exam) is required for admission.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	# of hours required by Bethel University	# of hours required by Christian Brothers University	# of hours required by Lincoln Memorial University-DeBusk COM	# of hours required by South College	# of hours required by Trevecca Nazarene University
Anatomy & Physiology	BIOL 2010/2011 BIOL 2020/2021	8	8	8	8	8
General Biology	BIOL 1110/1111 BIOL 1120/1121	8	8	8	8	-
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8	8	8	8	8
Organic Chemistry	CHEM 3310/3301 CHEM 3511/3501	-	8	8	Recommended	-
Microbiology	BIOL 1230/1231 or BIOL 3500/3505 (check with schools)	4	4	4	Recommended	4
Math (College algebra or higher)	MATH 1710, 1720, 1830, 1910	-	3	3	6 (may include stats)	-
General Psychology	PSYC 1030 (formerly 1200)	3	3	3	-	3
Human Growth and Development	EDPR 2111	-	-	-	-	3
Scientific Terminology	CLAS 3021	-	One semester	One semester	-	-
English Composition	ENGL 1010 ENGL 1020	-	6	6	6	-
Humanities/Social Sciences		-	-	-	6	-
Genetics	BIOL 3072/3073	4	-	-	Recommended	-
Biochemistry	CHEM 4511	-	-	-	Recommended	-
Upper Division Psychology		-	Recommended	Required	-	-

Podiatry Requirements

- Doctors of Podiatric Medicine (DPMs) are responsible for the prevention, diagnosis, and treatment of conditions associated with the ankle and foot.
- There are currently eight Colleges of Podiatric Medicine and more than 200 hospitals and institutions available for postdoctoral training in the field.
- There is no particular major required to enter podiatric training although a strong background in science is highly recommended. It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- Completion of a bachelor's degree is strongly encouraged and the MCAT is required for admission. Some schools will accept the DAT in place of the MCAT.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	Actual minimum semester hours required by all Colleges of Podiatric Medicine
General Biology	BIOL 1110/1111 BIOL 1120/1121	8-12*
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8
Organic Chemistry	CHEM 3310/3301 CHEM 3511/3501	8
General Physics	PHYS 2010/2011 PHYS 2020/2021	8
English Composition	ENGL 1010 ENGL 1020	6-8*

**Dr. William M. Scholl College of Podiatric Medicine requires 12 hours of Biology.*

**California School of Podiatric Medicine requires 8 hours of English/Communication Studies.*

Veterinary Medicine Requirements (TN & MS programs)

- Students graduate from veterinary school with a DVM (Doctor of Veterinary Medicine).
- There is no particular major required for veterinary medicine although a strong background in science is highly recommended. It is the applicant's responsibility to research each school and review recommended coursework in addition to verifying the prerequisites listed below. Application dates and deadlines may vary.
- The GRE (Graduate Record Exam) is required for admission.
- Students are strongly encouraged to meet with the pre-professional advisor early in their academic career to discuss plans of study, student involvement, the application process to professional school, etc.

Courses	U of M Course	# of hours required by University of Tennessee Knoxville	# of hours required by Mississippi State University
General Physics	PHYS 2010/2011 PHYS 2020/2021	8	8
General Biology	BIOL 1110/1111 BIOL 1120/1121	8	8
General Chemistry	CHEM 1110/1111 CHEM 1120/1121	8	8
Organic Chemistry	CHEM 3310/3301 CHEM 3511/3501	8	8
Microbiology	BIOL 1230/1231 or BIOL 3500/3505 (check with schools)	Recommended	4
Genetics	BIOL 3072/3073	3	
Biochemistry	CHEM 4511	4	3
Cell Biology	BIOL 3130	3	
Math (College algebra or higher)	MATH 1710, 1720, 1830, 1910		6
English Composition	ENGL 1010 ENGL 1020	6	6
Humanities/Social Sciences		18	15
Oral Communication	COMM 2381		3
Biochemistry	CHEM 4511		
Upper Division Science Electives		Recommended	12