



Hunter College (CUNY)
Guide to Doctoral Level Health Professions:
For Undergraduate Students

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The Pre-Health Professions Office at Hunter College

Who We Are and What We Do

The Pre-Health Professions Office at Hunter College assists students successfully traverse the road to a health professions career. *The Pre-Health Professions Office at Hunter College is not a "program;"* it is free of charge and does not require any sort of application process. We provide services to students who intend on going to medical school, vet school, dental school, and any other doctoral level health profession (not Master's level i.e. Occupational Therapy, Physician Assistant). We suggest what courses to take in order to get into these schools, we provide advisement, and keep a file of recommendations and evaluations from professors (see page 13).

When it is time to apply to health professions schools we guide students through the application process including personal statement assistance and "Committee Letter" writing. A Committee Letter is a very detailed and combined reference letter that incorporates what recommenders and evaluators have said as well as what the student said in an interview with a Pre-health Committee member (see page 14).

Who Should See Us

Students pursuing the following careers should open a file (see page 14) and come to office hours:

- Allopathic Medicine (MD)
- Osteopathic Medicine (DO)
- Veterinary Medicine
- Dentistry
- Podiatry
- Optometry
- Physical Therapy
- Pharmacy

Students interested in Hunter's nursing, physician assistant program, public health, nutrition, or medical laboratory science programs should contact the Brookdale Campus; Maria Mendoza 212-481-4773.

Explore Health Careers

For information on various health career options visit: www.explorehealthcareers.com

Planning Ahead

The purpose of pre-health professions planning is to become a competitive candidate. Health professions attract individuals with diverse backgrounds, talents and interests. Your undergraduate education should include a variety of experiences, with an emphasis on communication skills, social sciences and humanities, in addition to your foundation in the natural sciences.

Undergraduate students pursue a major at Hunter College and also come to the Pre-Health Professions office for advisement in addition to working with a major advisor- but again there are no pre-health program courses; only the pre-requisites that health professions schools require.

Specifics About the Different Health Profession Schools

All Health Professions Schools like to see well-rounded students. However, regardless of major or experience, health professions schools require that students demonstrate academic excellence in their science and math requirements. This is especially true for those post-baccalaureate students who are attending Hunter College to enhance their GPA. As a student who has already taken science courses at the undergraduate level, it is expected that you will EXCEL the second time around. Otherwise, it will be that much more difficult for you to get into medical school. A 3.7 mathematics and science GPA is expected.

Medical School

Medical Doctors (MD) diagnose illnesses and treat people who suffer from injury or disease. Their professional lives are filled with caring for people, keeping up with advances in medicine, and working as a part of a health care team. Every day, in communities around the country, doctors work in neighborhood clinics, hospitals, offices, and even in homeless shelters and schools.

About one-third of the nation's physicians are primary care doctors who provide lifelong medical services for the entire family. General internists, family physicians, and general pediatricians are all considered primary care doctors. They are the first doctors people consult for medical care. And they are trained to provide the wide range of services children and adults need. When patients' specific health needs require further treatment, primary care physicians send them to see a specialist physician.

Specialist physicians differ from primary care physicians in that they focus on treating a particular system or part of the body. Surgeons who treat injuries, disease and deformities by performing operative procedures, neurologists who treat disorders of the brain and spinal cord, cardiologists who treat the heart and blood vessels, and ophthalmologists who treat the eye are just a few examples of the many specialties in medicine. These physicians work together with primary care physicians to ensure that patients receive treatment for specific medical problems as well as complete and comprehensive care throughout life.

Physicians also do many other things. Physician researchers are at work today developing new treatments for cancer, genetic disorders, and infectious diseases like AIDS. Academic physicians share their skills and wisdom by teaching medical students and residents. Others work with health maintenance organizations, pharmaceutical companies, medical device manufacturers, health insurance companies, or in corporations directing health and safety programs. People with medical skills are in demand everywhere.

(adapted from <http://www.aamc.org/students/considering/careers.htm>)

Resources: www.aamc.org – *For information about becoming an MD*
 <http://www.aamc.org/students/mcat/> - *information about the MCAT Exam*

Test Requirements: Students interested in MD schools must take the Medical College Admissions Test (MCAT). Please see page 15 for more specific information.

Applications: Almost all **MD** schools now exclusively use the American Medical Colleges Application System (AMCAS) application system. Please see page 16 for more specific information.

Osteopathic medicine is a distinct form of medical practice in the United States. 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.

Osteopathic physicians, also known as Doctors of Osteopathy (DOs), work in partnership with their patients. They consider the impact that lifestyle and community have on the health of each individual, and they work to break down barriers to good health. DOs are licensed to practice the full scope of medicine in all 50 states. They practice in all types of environments, including the military, and in all types of specialties, from family medicine to obstetrics, surgery, and aerospace medicine.

DO's are trained to look at the whole person from their first days of medical school, which means they see each person as more than just a collection of organ systems and body parts that may become injured or diseased. This holistic approach to patient care means that osteopathic medical students learn how to integrate the patient into the health care process as a partner.

(Adapted from <http://www.aacom.org/about/osteomed/Pages/default.aspx>)

Resources: www.aacom.org – *for information about Osteopathic Medicine and DO Schools*
 <https://aacomas.aacom.org> – *for AACOMAS Application*
 <http://www.aamc.org/students/mcat/> - *information about the MCAT Exam*

Test Requirements: Students interested in DO schools must take the Medical College Admissions Test (MCAT). Please see page 15 for more specific information.

Applications: Most **U.S. DO** Schools use the American Association of Colleges of Osteopathic Medicine Application System (AACOMAS). Students applying to DO schools should check with prospective schools to find out if a different application process is required. Please see page 16 for more information.

Other Doctoral Level Programs

Dental Schools also like to see students who are academically well rounded, however many students applying to dental schools choose to major in Biology or Chemistry as undergraduates.

Resources: www.adea.org – for information about dental school and admissions
 www.ada.org - for information about becoming a dentist
 <https://portal.aadsasweb.org/> - dental school application

Test Requirements: Dental Admission Test (DAT). The DAT consists of multiple-choice test items presented in the English language and requires four hours and 15 minutes for administration. The four separate parts of the exam cover:

- Natural sciences (biology, general chemistry, and organic chemistry)
- Perceptual ability (two- and three-dimensional problem-solving)
- Reading comprehension (dental and basic sciences)
- Quantitative reasoning (mathematical problems in algebra, numerical calculations, conversions, etc.)

Most dental schools view the DAT as one of many factors in evaluating candidates for admission. As a result, schools vary in their emphasis on the different parts of the test.

The ADA suggests that applicants take the DAT well in advance of their intended dental school enrollment and at least one year prior to when they hope to enter dental school. An overview of individual schools' requirements regarding the DAT can be found in the ADEA Official Guide to Dental Schools. The individual school listings in this guide also address requirements regarding timing and scores on the DAT. You should also note that the DAT can be taken a maximum of three times. Applicants who wish to take the DAT more than three times must apply for special permission to take the test again. For details, visit the DAT section of the ADA website.

(Adapted from: [http://www.adea.org/dental_education_pathways/aadsas/Applicants/Pages/TaketheDAT\(DentalAdmissionTest\).aspx](http://www.adea.org/dental_education_pathways/aadsas/Applicants/Pages/TaketheDAT(DentalAdmissionTest).aspx))

Applications: The vast majority of **dental schools** use the American Dental Schools Application Service (AADSAS). Application deadlines vary by school. ALWAYS READ THE INSTRUCTIONS FOR THE APPLICATION, although the instruction booklet is very long it is imperative that students understand what is being asked, because a wrong answer or entry, even something as simple as entering a course title incorrectly could delay an application and result in missed deadlines. READ THE INSTRUCTIONS BEFORE asking an advisor for help, as a doctor, pharmacist, or dentist learning how to follow procedures is going to be crucial to being successful, so start now by reading application instructions!

Veterinary Schools like to see well rounded students; however, they require more upper level science courses for admissions. Biology is a good major choice for pre-vet students because of the amount of upper level coursework in the sciences that is required. Pre-vet students also need a variety of experiences with animals; it is important that one of these experiences be with large animals. Many students do rotations or internships at the zoo or at the race track or police horse facilities. Students interested in aquatic animals should look for opportunities at

the aquarium. Each vet school has its own set of required courses. Students should make sure they are able to meet the requirements for as many schools as possible as vet classes are small; some only take 35 students a year and there are only 28 Veterinary Schools in the country.

Resources: <http://www.aavmc.org/> - for information about becoming a Veterinarian
<http://www.aavmc.org/vmcas/vmcas.htm> - to apply to Vet programs

Test Requirements: Students interested in pursuing vet school must take the General Record Exam (GRE) at least 9 months prior to application. The GRE is comprised of 3 sections: Analytical Writing, Quantitative, and Verbal. Some programs may also require that students take one of the subject exams of the GRE—in biology or chemistry. Students should check with the programs they are interested in for more information.

Applications: Veterinary Medical College Application System (VMCAS) is used by the 28 American Veterinary Colleges.

Podiatry Schools have the same requirements and a very similar curriculum to MD and DO schools. Therefore preparation for podiatry students follows the same path as these programs. An internship with a podiatrist is not required but will enhance one's application. **Doctors of Podiatric Medicine (DPMs)** strive to improve the overall health of their patients by focusing on preventing, diagnosing, and treating conditions associated with the foot and ankle. They treat a variety of conditions and employ innovative treatments to improve the well-being of their patients. There are 9 accredited schools of podiatric medicine in the country.

(adapted from <http://www.aacpm.org/html/careerzone/require.asp>)

Resources: <http://www.e-aacpmas.org/> - To apply to podiatry schools
<http://www.aacpm.org/default.asp> -for information on becoming a podiatrist

Test requirements: Traditionally the MCAT has been the only standardized test required for admissions to the colleges of podiatric medicine. However, some colleges will accept the GRE or DAT in lieu of the MCAT. Students should check with the podiatry school they are interested in.

Applications: The American Association of Colleges of Podiatric Medicine Application Service (AACPMAS) allows you to apply to all nine of the nation's schools and colleges of podiatric medicine with one online application.

Optometry Schools have the same requirements and a very similar curriculum to MD and DO schools. Therefore preparation for optometry students follows the same path as these programs. Students should participate in an internship or volunteer opportunity with an optometrist.

Resources: <http://www.opted.org> -for information on becoming an optometrist
<http://www.optomcas.org/> - To apply to optometry school

Test Requirements: The Optometry Admissions Test (OAT) is required. The OAT is a standardized examination designed to measure general academic ability and comprehension of scientific information. The OAT consists of four tests: Survey of the Natural Sciences (Biology,

General Chemistry, and Organic Chemistry), Reading Comprehension, Physics and Quantitative Reasoning.

Applications: OptomCAS is a service of the Association of Schools and Colleges of Optometry (ASCO) and is administered by Liaison International (LI), an education information technology company located in Watertown, MA. Not all schools of optometry use the OptomCAS system please check optomcas.org and the individual school websites for information.

Please note: some schools and colleges of optometry will not accept a Committee Letter, while others will require a Committee Letter. If you are submitting a Committee Letter, be sure to check the requirements of each individual program for the types of letters they will accept.

Pharmacy Schools are different in that some of the Pharm. D. programs take students after completion of two years of pre-requisites but grades are of the utmost importance.

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. You must enjoy and excel in chemistry if you want to be a competitive candidate for Pharmacy school and a successful pharmacist

(Adapted from <http://www.aacp.org/resources/academicpolicies/admissionsguidelines/Documents/studentbrochure.pdf>)

Resources: <http://www.pharmacas.org/> -To apply to pharmacy school
<http://www.aacp.org/Pages/Default.aspx> - pharmacy school information
pcatweb.info – to find out about the PCAT

Test Requirements: The American Association of Colleges of Pharmacy (AACP) endorses the Pharmacy College Admission Test (PCAT) as the official preferred admission test for entrance to pharmacy school. The test has several sections: writing, verbal, reading comprehension, biology, and chemistry (BASIC knowledge of beginning organic chemistry will be tested). The PCAT is only offered 4 times a year in January, June, August, and October. Check with schools you are applying to for score and testing requirements.

Applications: Pharmacy College Application Service (PharmCAS), a centralized application service for applicants applying to colleges and schools of pharmacy. *Most* schools of pharmacy use the PharmCAS system but some do not, check the PharmCAS website and websites of schools you are applying to make sure they take the centralized application. ALWAYS READ THE INSTRUCTIONS FOR THE APPLICATION, although the instruction booklet is very long it is imperative that students understand what is being asked, because a wrong answer or entry, even something as simple as entering a course title incorrectly could delay an application and

result in missed deadlines. **READ THE INSTRUCTIONS BEFORE** asking an advisor for help, as a doctor, pharmacist, or dentist learning how to follow procedure is going to be crucial to being successful, so start now by reading application instructions!

The Pre-Health Timeline Freshman and Sophomore Year

1. Open a file with the Office of Pre Health Professions Advising (Do this by going to our website)
2. Start taking your pre-health coursework (Go to page 10 for more information)
3. Build your pre health resume
 - Find research opportunities
 - Begin volunteer experience

*The best way to be proactive about gaining research and volunteer experience is to go to Hunter College Career Development Services.
4. Collect recommendation letters and evaluations from faculty (specifically science and math faculty), research/volunteer supervisors, managers, etc.
5. Review for the MCAT (DAT/PCATS)...always review for the MCAT.
 - Your MCAT scores will make or break your chances of getting into medical school.
 - Your science, math, and English/writing courses will prepare you for the MCAT but that alone is not enough, see page 15 for more information about preparing for the MCAT.

Junior Year FALL

1. Begin research
2. Continue test preparation
 - Take Kaplan, Exam Crackers, Princeton Review course
 - By review books
3. Check transcripts for mistakes
4. Start a rough draft of your personal statement
5. Keep up to date with the recommendations and evaluations in your file
 - This is crucial...so say Thank You to those who have submitted letters!

Junior Year SPRING

1. Take the April MCAT (or other health professions exam)- **ONLY DO THIS IF YOU FEEL PREPARED AND IF IT WON'T INTERFERE SIGNIFICANTLY WITH YOUR COURSEWORK.** Otherwise, take the MCAT during the early part of that summer.
2. Begin application process
 - Apply for fee waivers
3. Compile a list all of the schools (and possibly special programs) you want to apply to. Note their primary application and secondary application deadlines.
 - Apply where you think you have a chance of getting in- consider schools outside of NY especially those in the Midwest (see pg 19).

Senior Year FALL

1. Complete research projects, degree requirements & secondary applications
2. Go on scheduled school interviews
3. Send updated transcripts to medical schools
4. Have parents file taxes early for financial aid

Senior Year SPRING

1. File financial aid forms for school of choice
2. Start looking at financial aid awards & loan deferments
3. Ask about pre-matriculation programs
4. Start planning your relocation

Course Requirements for Pre-Health Professions

Most health professions schools require the same undergraduate courses:

Subject	Course Title	Credits
One Year of English (see major advisor about placement and English requirements)		6
General Biology I (includes lab) see note below	BIOL 100	4.5
General Biology II (includes lab)	BIOL 102	4.5
General Chemistry I see note below	CHEM 102	3
General Chemistry II	CHEM 104	3
General Chemistry Lab (take with or after CHEM 104)	CHEM 106	3
Organic Chemistry I	CHEM 222	3
Organic Chemistry Lab I	CHEM 223	2.5
Organic Chemistry II (taken after completion of Organic Chemistry I)	CHEM 224	3
Organic Chemistry Lab II (taken after completion of Organic Chemistry Lab I)	CHEM 225	2.5
General Physics I (includes lab) see note below	PHYS 110	4.5
General Physics II (includes lab)	PHYS 120	4.5
Pre-Calculus (placement testing and transfer credit will determine if you need this course, or if you need to take another math course prior to pre-calculus)	MTH 125	4
Calculus (pre-req MTH 125)	MTH 150	4
Statistics (recommended)	STAT 213	3

Students often assume they can complete courses in the summer or in either the Fall or Spring semester—this is not always the case. Check carefully for when courses are offered.

Such a misstep could cost you an extra year so do your research!

Special Course Notes:

Chemistry

Chemistry 106 - General Chemistry Lab (this one semester lab satisfies health professions schools 2 credit lab requirement)

Freshman only (no post-bac or transfer students) can take 111 and 112 w/labs instead of 102, 104, 106.

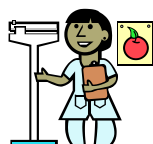
Physics

Physics 111 & 121 are acceptable in place of 110 & 120 however this requires taking Calculus II (MTH 155). This option is not recommended unless you are very confident and comfortable w/your calculus skills. Remember the goal is a high GPA.

Biology

Biology 100 & 102 are never offered in summer.

BIO 100 is only offered in fall; BIO 102 is only offered in spring.



Additional Coursework

Taking advanced science courses can be beneficial to your knowledge and application. Consider taking one or more of the following courses, only if you are confident you can do well.

- CmHe 200- Controversial Issues in health
- CHEM 376- Biochemistry
- BIO 202- Cell and Molecular Biology II
- BIO 300- Biological Chemistry
- Physics 420- Biophysics
- BIO 220 Genetics and Evolution
- BIO 390- In Cell Structure

Veterinary schools often require 1 semester of microbiology & biochemistry. Students should have two 10 week field experiences: one with large animals and one with small animals.

Optometry schools generally require 1 semester of statistics & 1 of psychology. Some desire 1 semester of abnormal psychology.

Having a Competitive Transcript

D, F, C/NC and Withdrawal Options

It is important to discuss the [C/NC and Withdrawal options](#) for any class with an advisor before making a decision about your grade. However, this is especially important for the pre-health prerequisites. You should avoid a pattern of such remarks on your transcript since professional schools may interpret this as indicating poor judgment, bad planning, or the inability to finish what you begin.

Withdrawals do not affect your GPA. If you are expecting a grade lower than a C in a course, withdrawing may be a good option. As far as your college transcript is concerned, if you earn an F in a course, this will be replaced in your GPA calculations once you repeat the course for a better grade. However, if you earn a D, that grade continues to be factored into your college GPA calculation even if you repeat the course and do significantly better. If you take a NC in a course, that counts like an F in your GPA calculations but will also no longer factor into your college GPA calculation once it is replaced. However, the NC will still count as an F in your GPA as calculated by the AMCAS system for medical school applications. Also, if you earn a C or Credit for a course, that course CAN NOT be repeated for credit to improve your GPA. To summarize, Credit/No Credit can adversely affect your GPA, so it is advised that students pursuing doctorate level health professions avoid this at all costs. If you decide to take C/NC when you apply to medical school: **C (Credit) = C and NC (no Credit) =F**

Summer Session/Intersessions

Unless circumstances beyond your control require it, do not take any required prerequisites during the summer or an intersession. Admissions committees place more value on courses taken in the fall or spring semesters because they span a 15-week term. Classes at Hunter do fill up quickly and sometimes taking a lab or lecture over the summer is unavoidable, but do your best to complete REQUIRED courses during the fall or spring semester.

Similarly, all courses required should be taken at a four-year institution, *not a community college*. Transfer students who have taken pre-health requirements at a community college should have those courses evaluated but once they are enrolled at a four-year institution they are encouraged to complete their remaining pre-health requirements there. If you are considering getting an E-permit and registering elsewhere PLEASE consult with a pre-health advisor first!

Maintaining and Balancing Your Schedule

There are no substitutes for good grades. Anything that impairs your ability to earn good grades in challenging courses may ultimately cost you in terms of time and lost opportunities. Take on courses and experiences that you enjoy but that will also result in success. Also, although health professions programs like to see that you can manage a rigorous schedule, you never want to take so many classes that you find yourself overloaded and unable to perform well. This can be especially true for science courses, which tend to be quite demanding.

Health Related Experience

When you are competing for a seat at a rigorous school of the health professions, you need more than good grades and “book knowledge” about the career that interests you. You need some first-hand experience of what the field of healthcare is like. Getting health-related experience is your evidence to the admissions committee that you are motivated, caring, compassionate, and sure of your career goal. Your experience can come in a number of ways but should include some patient interaction. It is best to think of your health-related experience in terms of semesters and years. The length of time you spend gaining health-related experience is a sign of your dedication.

Volunteering

Volunteers are always needed and hospitals will try to place you in a setting that will be mutually beneficial. If necessary, call or visit several facilities to find the one that best meets your needs. There are also other ways, outside the hospital, that you can help the community. Every student should have a *minimum* of 200 volunteer hours but remember that is a *minimum* doing “just enough” isn’t what gets you into medical school.

For more information on volunteering please visit Career Development Services, East 805.

Shadowing

You can shadow a doctor to see what a typical day is like for them. Start with your own doctor and ask for referrals of other doctors who may allow you to shadow them as well. Exposure to a broad range of opportunities is important. If you choose to shadow a health-care professional, it should be considered only one of your many experiences.

Getting Paid

Getting paid for health related experience is a great way to earn some money and get the experience you need! Just remember that it is important to show commitment and compassion for others.

Research

If you are planning to pursue a medical research career or an MD/PhD than YES research experience is required. If you want to be a clinician, healer, etc with no desire to research, then no, it is not necessary. It has however become a trend for students who apply to medical schools to gain research experience although they do not intend to move into a research related career in medicine. There are many positives that can go along with gaining research experience: it can make your application more competitive by adding a recommendation. Also, you might just discover that you love research!

YOUR PRE-HEALTH FILE

The Pre-Health Committee

The Pre-Health Committee at Hunter College is comprised of distinguished staff and faculty from all departments of the university and the staff in the Office of Pre-Health Professions. The purpose of the committee is to evaluate students and write committee letters on their behalf for their applications.

Committee Letter

A member of the Pre-Health Committee will interview a student and use the evaluations, recommendations, and pre-health packet in the students file to write the Committee Letter. A Committee Letter is a very detailed and combined reference letter that incorporates what recommenders have said and what the student has said in their interview with their letter writer. So, rather than sending ALL the recommendation letters in a file students who qualify (See below) will receive ONE letter that incorporates all of the information in their file. Sometimes, when a student has recommendation letters that the committee member feels are important for the schools to read in full, they will request that those letters be sent along with the Committee Letter.

Qualifying for a Committee Letter

In order to be considered for Committee letters students must have a **3.3 MINIMUM SCIENCE GPA** and the following items must be in their pre-health file:

- A Recent resume
- All college transcripts- *unofficial copies are fine for your pre-health file, not your application. If you are a Hunter student we will provide the copy for your file.*
- Evaluations and letters of recommendation from faculty, research mentors, volunteer programs, employers, etc.
- Pre-health supplemental packet including a personal statement (link on website).
- These items must be in the file by March 1st for a Spring Committee Letter or August 1st for a Fall letter.
- Please remember we don't automatically check files, **if you are ready for a Committee Letter you must submit your Pre-Health Packet (link is on the website).** This indicates to the Committee that you want to be considered for a Committee letter.

Evaluations Vs Recommendations

An Evaluation is a form that a professor, usually of a math or science course, uses to write a sentence to a paragraph about a student's performance and/or skill level in class. These evaluations are a great help for committee members when letter writing is taking place because it gives writers an overview of how a student has been doing across the board in science and math courses. *Please send e-mail or have your professor send e-mail to prehealth@hunter.cuny.edu for more information about the evaluation form.*

Recommendation A recommendation is a full-length letter, on letterhead, written by a professor, employer, research supervisor, MD, DO, etc. For more details please see [page 24](#) for tips on what the letter should include. Recommendation letters are always preferred over evaluations because they are far more detailed and professional. However, you should not ask for a letter of recommendation from everyone that you have ever worked or taken a class with. Rather than overload your file with letters that do not say very much or ones that do not portray you in a positive light, it would be to your advantage to request letters of recommendation from people who you feel will have both positive and substantive things to say about your performance in the area in which they know you. Exceptional recommendation letters that portray a student's outstanding qualities can also be included WITH a committee letter if committee members feel that the content of the letter may better a student's chances of admission into a health professions school.

MD/PhD Students VERY IMPORTANT****

If you are intending to apply to MD/PhD Programs it is IMPERATIVE that you receive AT LEAST 2 letters of recommendation from 2 DIFFERENT research experiences. These letters MUST DETAIL the research that you conducted. Please inform the individual writing the recommendation letter that the letter must be a VERY DETAILED letter about your research project and your skills/abilities in the lab. Many times students do not request this of the letter writer and then the letter is insufficient and negatively impacts the student's chances of getting into MD/PhD programs. It is YOUR RESPONSIBILITY to inform your recommender that they need to be detailed in their letter, otherwise they just assume that they should write a regular letter about your aptitude and not one that specifies your research project and abilities in a lab.

MCAT

Most of the pre-health students at Hunter are pursuing allopathic or osteopathic medicine so this booklet is going to include detailed information for those students. Those who are pursuing other fields should see the resources section listed under their chosen field in this booklet and of course come in for advising!

Registration

Be sure to register for the MCAT as soon as registration is available, as you may not get your first choice of test site if you are late. Registration dates are usually announced in the Fall for the following year with the first test date typically being in January. See <http://www.aamc.org/students/mcat/> for more information.

All students planning to apply for admission to medical schools for the Fall of one year should try to take the MCAT no later than July of the previous year. Try not to wait until September because many schools will not accept the September scores for admittance during the following year.

Format

The MCAT consists of three multiple-choice sections and a Writing Sample. It takes approximately five-and-a-half hours to complete.

- 1) Physical Sciences - 70 minutes to complete 52 questions that test reasoning in General Chemistry and Physics.
- 2) Verbal Reasoning - 60 minutes to complete 40 questions that are designed to measure "comprehension, evaluation, application, and incorporation of new information."
- 3) Writing Sample - two essays, 30 minutes each.
- 4) Biological Sciences - 70 minutes to complete 52 questions that test reasoning in General Biology and Organic Chemistry.

Four separate scores are reported, indicating your performance on each section. The scores are reported on a scale ranging from 1 (lowest) to 15 (highest) for the three multiple-choice sections. The essay is read and scored by two readers; the mean score is converted to a letter grade, J through T, with J the lowest, and T the highest score.

You will receive a copy of your MCAT scores in the mail approximately thirty days after you have taken the test. You also have the option of obtaining your scores online, which is faster. **The American Medical College Application Service (AMCAS) will automatically send MCAT scores to the participating schools to which you applied if you release them.**

Preparation

The MCAT tests your knowledge in basic science and your reasoning ability; it is not an aptitude test. An overview of the subjects covered in the test and practice tests are available online at www.aamc.org/students/mcat/. A thorough familiarity with the material in a good introductory text in the required science courses is recommended as the best basic assurance of factual preparation. And, you should be familiar with words from introductory text glossaries.

APPLICATIONS

AMCAS

The American Medical Colleges Application Service (AMCAS) is a centralized, non-profit organization used by most U.S. allopathic medical schools for the processing of preliminary applications. All students applying to AMCAS-participating schools must submit their application material to those schools through AMCAS, but applicants submit only one set of application materials and official transcripts, regardless of the number of AMCAS schools to which they are applying. The AMCAS is dated according to your intended year of matriculation i.e. if you are applying for Fall 2012, you will complete the AMCAS 2012 application in 2011.

The major goal of AMCAS is to provide the participating medical schools with uniform, readable information on candidates. The largest sections of the application are Biographic Information, Experience, Personal Comments (often referred to as the "personal statement"), and Academic Record. **AMCAS includes very thorough instructions for these and all sections, so please read them!** Your first step just prior to the summer in which you're applying will be to fill out the request for your transcript to be mailed to AMCAS. **Be sure to use the A.MCAS Transcript Request Form. Instruct Hunter College Registrar to wait until spring semester courses are completed and those grades have been recorded.** Be sure to contact any other U.S. or Canadian schools where you have studied and have those transcripts sent as well—this includes pre-freshman college courses and programs. Allow plenty of time for transcripts to be sent. Traditionally, the first date for submitting AMCAS applications has been **June 1**, although the date has been a few days later in recent years.

The first sections of the AMCAS application are straightforward. Answer the questions concisely and accurately. The two most commonly asked questions about this page involve residency and the Experience section:

Residency: As a full-time student you are generally considered a resident of the state where your parents reside. AMCAS will not consider you a resident of more than one state. If you want to receive preference from New York medical schools, you may claim NY residency (but you will need to register to vote, pay taxes and have your car registered in NY, as well as attending school here).

Experiences: Your work experience/activities should be listed in the Experience section neatly in order of importance, with the most important first. However, it is important to note that when medical schools download your AMCAS application, they may select to have your experiences listed in a variety of ways (chronologically, reverse-chronologically, alphabetically, etc.) so ultimately the order in which individual schools will view your activities is up to their discretion.

The work/activities section of the AAMC application is one that causes many applicants difficulty. Not much guidance is given about what to include, and how to describe what you choose to include. Think of the work/activities section as an opportunity to bolster, expand on, and support the rest of your application. Some admissions committee members will read it after your essay and will be looking for its entries to support the elements of your essay. Some will read it before your essay, and so it will provide a framework that can make your essay more

convincing and compelling. Remember admissions committees already know, in general, what research assistants, hospital volunteers, and the like do in their positions. Therefore, this section gives the applicant the opportunity to present to the admissions committee with what they personally learned from the experience, and what particular qualities they demonstrated by participating in it. Activities that demonstrate empathy, organization, leadership, teaching ability, tenacity, dedication, and communication are especially valuable to medical schools, and so applicants should attempt to highlight how those qualities are demonstrated by the activity.

Below is an example of a passage describing an applicant's experience in an Emergency room. Notice that it isn't just a list or description of duties but an explanation of how the position helped the student grow as a future physician (*adapted courtesy of Hunter student David Renshon*):

My work in the Emergency Department over the past three years has involved gradually progressive responsibilities. As I became more comfortable with the ED and the staff became more comfortable with me, my duties included observing resuscitations, procedures and evaluations; assisting the staff by finding charts, turning over and stocking patient rooms, and finding patients who wander off; assisting families of patients by relaying information and status; training and orienting new volunteers; and generally assisting patients. I have found my greatest satisfaction from this experience to be the ability to anticipate what the patient needs, or otherwise how I can help them, in a difficult situation. This may involve talking with them to help them pass the time, playing with their child to ease their responsibilities, finding out where their doctor or nurse is, or just getting them comfort items like a blanket. The busy pace and high volume of the ED allows me to be proactive in finding new ways to help, as there is always more to be done than time to do it.

Academic Record: This section is the most complicated part of the application. You are essentially transferring your academic work into standard AMCAS terminology. You will need a copy of your transcript(s) to complete this part. **Follow the directions carefully.** A few key points:

- **Important: List courses for which you received AP credit alongside your freshman year (FR) courses in the academic status column. Under the heading of course number, type "Ap.99"**
- If you have completed a course for which you initially received an "incomplete," list the grade, not an "I." Be sure your transcript has a grade recorded before you send your transcript to AMCAS.
- Make an educated guess as to what courses you will take the following year. You will not be held to them, but schools like to see what you are planning. This is vital if you have not completed their "entrance" requirements, such as Math or English, or if you plan to take one of the courses they "suggest" (such as Biochemistry).
- **Any courses taken after college graduation, not in a degree program are "PB."**
- Enter coursework EXACTLY as it is written on your transcript, if there are any discrepancies between what you have entered the transcript it will delay processing and possibly affect your chances of getting into schools.

Personal Statement

Kaplan usually holds a free personal statement workshop on campus each year so look out for

more information but definitely plan on attending. After preparing a draft or two, polish your personal statement and type it neatly within the space provided. **If you cut and paste, carefully review your work, formatting is generally lost when pasted onto AMCAS.**

Some things to remember:

- If your inspiration to attend medical school has come from a personal medical experience do not spend too much of your essay using medical terminology and describing the condition that has affected you or someone close to you. It is important to mention it but writing about specifics tells the admissions committees NOTHING about you, your journey, your abilities, or why they should accept you. It is important to mention but be careful not to waste space.
- Wanting to be a doctor since you were a child *is not a compelling enough reason* for a school to accept you. Think carefully about what has motivated and inspired you, about your experiences as an intern, volunteer, employee, and student. What sets you apart...that is the most important part.
- Many students have VERY moving stories about their childhood including immigrating to the US, dealing with family illnesses, and being in financial despair. If you fall into this category it is important to mention it in the essay but it cannot be your only basis for wanting to become a doctor. It can be the inspiration for the start of your journey but not the *only* motivating factor that paved the way.
- **HAVE SOMEONE PREFERABLY AN ENGLISH PROFESSOR, WRITING TUTOR, or SOMEONE IN THE WRITING CENTER PROOF READ YOUR ESSAY!** No matter how compelling your story may be, excessive grammatical errors are 100% unacceptable and will DEFINITELY affect your chances of getting accepted!

Disadvantaged Status

Disadvantaged status is self-determined and each medical school has their own policies for how they use this information.

- This information is voluntary and will not affect the processing of your application. It certainly won't negatively affect you, so if you feel that any of the following apply to you check the box and answer the questions.
 - Family received governmental financial support
 - English is NOT your first language- *this is important to note especially if you do poorly on the verbal section of the MCAT*
 - Grew up in an underserved area

There are more specifics in the Disadvantaged students section this is just an overview.

- Click the **Yes** button to be considered a disadvantaged applicant. A Disadvantaged Status form will appear. Questions marked with an asterisk (*) are required.

Submitting Your Application

When you submit your AMCAS application, be sure to designate the medical schools to which you plan to apply. **You can add schools later**, but be sure that the schools you list originally are ones in which you are really interested.

Choosing schools:

- Remember NY schools are the most difficult to get into; think hard about your GPA and MCAT scores before adding a lot of NY schools
- The Midwest is looking for diversity so students from NY, especially minority students should consider the Midwest

After AMCAS processes your application, they will make it available for your designated schools to download. When the schools receive your application, most will send you supplementary materials requesting recommendations and a fee.

Most schools have a "supplementary" or "secondary" application with additional essays and further questions. A few schools do a preliminary screening before sending you supplementary materials. Details of individual schools' procedures can be found in the book, *Medical School Admission Requirements* ("the MSAR").

To review:

- 1) Complete your AMCAS application and submit it online as soon after June 1 as possible. You will receive email verification of its receipt at AMCAS. **We do advise everyone to submit the AMCAS in early June if possible, even if you're taking the MCAT later in the summer.**
- 2) In four to six weeks, sometimes faster, you will receive notice by email that your application has been certified. If you don't receive this notice, **call the AMCAS office at (202) 828-0600**. All AMCAS questions that are not answered online should be addressed directly to AMCAS via this helpline.
- 3) Soon after you receive your verification, schools will send you secondary applications and request letters of recommendation and a fee. Secondaries can be very time-consuming to fill out, so allow enough time to return them promptly. **We recommend returning secondaries within two weeks if possible.** They should be submitted **well before** any official deadline that the school has posted. The charge for the AMCAS 2010 service for processing the application for one school was \$160, with an additional fee of \$31 for each additional school. Every year there is possibility that fees will increase, so be prepared. A fee waiver program is available. Information about fee waivers is included in the AMCAS application. If you are granted a fee waiver by AMCAS, most of the participating schools will waive their own application fee as well.
- 4) If you make any changes to your application after you have submitted it, **YOU MUST RE-SUBMIT THE APPLICATION OR THE CHANGES WILL NOT BE SAVED!!!**

AACOMAS

The AACOMAS application is very similar to the AMCAS application. Read the instructions very carefully and enter information accurately.

Having the Committee Letter/Non-Committee Letter Sent to AMCAS or AACOMAS

If you have gone through the Committee Letter process or if you did not qualify for a committee Letter but are having a non-committee packet sent out please read very carefully.

1. Only students who have been interviewed by a member of the Pre-Health Advisory Committee will have a committee letter.
2. We must receive a copy of your AMCAS *Letter Request Form* and a copy of your **SUBMITTED** AMCAS application and/or a copy of your **SUBMITTED** AACOMAS application with the list of schools you are applying to and your AACOMAS ID number in order to process your letter request. Do not give us the copies until you have pressed the SUBMIT Button, the applications are different after they are submitted and we need the submitted version. Please send these electronically to:

prehealth@hunter.cuny.edu

- a. AMCAS Letter Request form information; please enter the following information:
Dr. Karen Phillips
695 Park Ave
NY, NY, 10065
212-772-5244
3. Your application MUST BE SUBMITTED to AMCAS and/or AACOMAS in order to be processed. If it is not SUBMITTED then your letter CANNOT be sent.
 4. A check or money order for \$10 for each application (one for AMCAS and/or one for AACOMAS) made out to HUNTER COLLEGE is required to process your letter request. Please make sure that YOUR NAME is somewhere on the check or money order. This means if a parent or someone else has given you a check please write your name on the "Memo" line or we have no way of knowing who the check came from.
 5. Letters will only be sent AFTER MCAT scores have been reported. Please make sure that your MCAT scores are released to this office if you want to receive a Committee Letter.
 6. Students who are applying to MD/PhD programs must **print out separate letter request forms** one for the committee letter, and one for each of the writers of the research letters. This means you will have at least 3 letter request forms possibly 4 if you send in 3 research letters. Email the forms to prehealth@hunter.cuny.edu.

Students Applying to Dental School:

Many students who go to Dental school receive committee letters. However, the process is very different. When you fill out the AADSAS application they will ask for the e-mail address of your letter writer. Please put prehealth@hunter.cuny.edu. They then send the e-mail out, giving us the information needed to upload the letter. You do not need to pay us a fee or give us a copy of your application.

Students Applying to Optometry School

Some optometry schools do not accept committee letters and others require a committee letter if one can be provided. It is VERY important for applicants to find out if that will affect them. As with AADSAS, OptomCAS will ask you to enter the email address of the letter writer, please enter prehealth@hunter.cuny.edu.

If you did not qualify for/request a Committee Letter but want letters of recommendation from your file sent please read carefully- **OptomCAS has a file size limit which means that we cannot upload all of the letters in your file.** Because of this it may benefit you to ask people who have previously written recommendations to send them in directly rather than asking for the non-committee option. OptomCAS asks recommenders to evaluate the student abilities on a scale in addition to the letter of recommendation and as advisors it is hard for us to evaluate students because we have not been in courses or worked with them for long periods of time.

In order to benefit the most from your recommendations it makes the most sense for students applying to optometry school to ask the recommenders directly and not go through the pre-health office if they did not receive Committee Letter.

If an applicant has received the Committee Letter then that letter will count as **one recommendation** on OptomCAS which means the student will then have to ask one or two more individuals to send in Letters of Recommendation (LOR). Check with individual schools for their requirements.

Students Applying to Schools of Podiatric Medicine

AACPMAS is used by all 9 of the podiatry schools. Every school feels differently about electronic letters of recommendation. Students should check with the schools to see what their requirements are in regards to LOR. Generally, students going to podiatry school do not receive Committee Letters.

Students Applying to Schools of Pharmacy

Students applying to pharmacy school will not receive committee letters.

ETIQUETTE IN HANDLING ACCEPTANCES

You may accept several offers of admission until May 15, although we recommend that applicants **hold no more than two acceptances at one time**. The only reason to hold more than one offer of admission is to determine financial aid opportunities at various schools. After May 15, however, schools have the legal right to withdraw their offer of admission. In the late winter, the Association of American Medical Colleges distributes to medical schools a list of all accepted students. The schools, therefore, know if you are holding more than one acceptance.

When you receive an offer of admission, withdraw promptly (in writing) if you are sure that you prefer another school. This helps admission committees and your fellow applicants who have not yet been admitted. If finances are important in determining your choice, be sure to fill out and submit the appropriate forms as quickly as possible. Most medical schools will provide you with a financial aid packet that includes the GAPS FAS or FAF forms, as well as guidelines established by the school.

A few words of caution: There are far fewer scholarships and grants available for medical school than there are for undergraduate or graduate study, and medical school is more expensive. Medical students generally finance their education through a combination of federal loans. The average debt for medical school graduates is currently over \$100,000. The best source of information about your future debt obligation is the financial aid officer at the medical school where you have been admitted.

(Courtesy of the City College of New York)

Please come to see us at least once each semester. Good luck!

Guidelines for Letter Writers

Hunter students are required to submit evaluations from all science courses in which they have received a B- or better. These evaluations are an essential part of the Pre-health Committee's letter. We request evaluations from every science faculty/TA—we encourage students to submit at least two letters of recommendation from faculty in any department who knows them well.

Evaluations/Letters should address the following areas or questions:

- Letters should be addressed to the Pre-Health Committee of Hunter College.
- Indicate in what capacity you have known the applicant.
- Assess the applicant's academic skills and potential (*if applicable*) – How well does the student read write and analyze? Was the course he/she took with you a particularly rigorous one? If so, why? Discuss specifically the student's work in the course(s). For example, mentioning the topic of a student's paper, or the types of comments he/she contributed to class discussions makes the recommendation substantive and convincing.
- Include information about the applicant's personal qualities (*i.e. integrity, determination, motivation, leadership, maturity, reliability*). Does the applicant have special interests, striking personal qualities, or an interesting background? If you are familiar with a student's extra-curricular or employment activities you can also note these.
- Information regarding the applicant's social skills (*e.g. ability to interact with others in groups, interpersonal skills*).
- What information do you have about this applicant that may be relevant and is not likely to be available from other sources?
- How does this applicant compare to other students you have taught (*or if you are an employer, individuals with whom you have worked?*)
- The letter must be on letterhead.
- Please send your letter via email: prehealth@hunter.cuny.edu OR via fax to 646-224-9585. We have converted to electronic files.
- Thank you for taking the time to write on behalf of the applicant

Letters for students applying to MD/PhD Programs

If a student has worked on research with you/in your lab and they have expressed interest in applying to MD/PhD Programs it is imperative that the letter you write includes detailed information about the research the student conducted and the student's ability to work in a lab. These letters are crucial to the student's acceptance into MD/PhD programs and require more detail than regular recommendation letters.