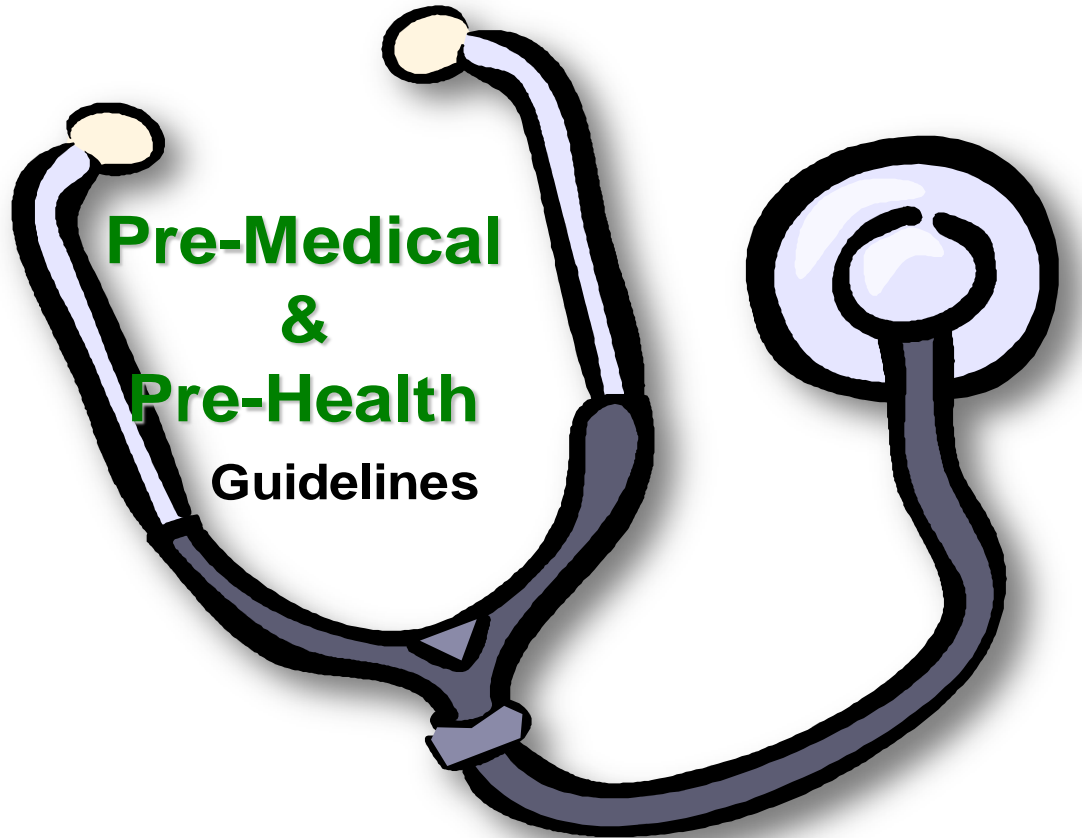


UNIVERSITY OF MIAMI



2011 - 2012

For students interested in:

Allopathic and Osteopathic Medicine ♦ Dentistry ♦ Podiatry

Veterinary Medicine ♦ Chiropractic ♦ Optometry

TIMETABLE & CHECKLIST

Academic Preparation & Professional Development



Freshman Year

- _____ Attend Premedical Orientation in August
- _____ Sign up for a Premed 101 Group Session in the Premed Office and open a premed file
- _____ Join a Pre-Health organization (such as AED, AMSA, MAPS, MWM, CERT, Pre-dental, Pre-vet club etc.)
- _____ Establish good study habits and a strong G.P.A. (A's and B's)
- _____ Generate an academic plan with your academic advisor
- _____ Start volunteer work that provides patient contact. Plan to shadow a health professional over the summer or volunteer at hospitals or clinics.
- _____ Investigate undergraduate activities and get involved
- _____ Get to know the faculty who are teaching you
- _____ Develop and/or expand hobbies and interests
- _____ Make productive use of your winter, spring and summer breaks



Sophomore Year

- _____ Start thinking about faculty evaluations
- _____ Make a meaningful contribution to a club and/or organization
- _____ Become a tutor through the Academic Resource Center or Athletics Dept.
- _____ Continue volunteer work and explore research opportunities
- _____ Investigate alternative health career options
- _____ Sign up for a sophomore advising session
- _____ Start planning to cover health professional school application costs
- _____ Use the summer for volunteering, research, work, study abroad, summer programs
- _____ Begin to think about which medical schools interest you and visit their websites
- _____ Begin MCAT or admission test preparation as your classes progress. Pay special attention to verbal reasoning section.



Junior Year

- _____ Continue to explore research and volunteer opportunities
- _____ Meet with the Premedical Advisor (during the *fall* and *spring* semesters only)
- _____ Prepare for MCAT, DAT, GRE, OAT (plan a lighter course load for spring)
- _____ Attend Mandatory Information Session in the spring semester (Juniors and Senior only)
- _____ Complete required coursework for admission tests
- _____ Sign up for interview workshop at Toppel Career Center
- _____ Have the Writing Center staff review your personal essay/statement
- _____ Review admission guide for relevant professional Schools (MSAR, VMCAS, ADEA Guide)
- _____ Register and take for appropriate admission tests (MCAT, GRE, DAT)
- _____ Complete premed file (p.8) and check status at the premed office in Ashe 205
- _____ Request Premedical Advisory Letter Packet (beginning in early June – when cycle opens)
- _____ Submit application to health professional schools (begins during the summer)



Senior Year

- _____ Complete secondary applications for professional schools (continues through the fall)
- _____ Fill out the letter request form and submit the Virtual Eval fee or provide stamped envelopes for letter packet (continues through fall)
- _____ Meet with Premedical Advisor as necessary
- _____ Arrange mock interview with Toppel Career Center
- _____ Prepare to travel for interviews
- _____ Keep the Premedical Office informed of your interview /acceptance /waitlist /rejection status
- _____ Prepare for reapplication process if necessary



The Premed Office strictly adheres to the University Of Miami Honor Code.

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Dear Pre-Health Student:

If you have not yet begun your preparation for a health professional career, it is time to begin NOW. Gaining admission to a health professional program requires mindful, consistent planning and, as your premedical advisor, it is my desire to assist you in this challenging endeavor.

The University of Miami provides an ideal environment to nurture your pre-professional development. As an undergraduate, you will make important decisions about your major, campus involvement, community activities and research, and application to professional school. The staff in the Premedical Studies Office will work with you to make this seemingly enormous task smooth and ultimately successful.

We have prepared the “Premedical Student Guidelines” to provide you with direction and information. Please read this material closely and familiarize yourself with the policies and procedures of our office. This preparation will allow our meetings to focus more on you and your specific needs and on getting to know you better. The ultimate goal is to create a comprehensive and personal premed file. The contents of your file will reflect your growth as a student and serve as the basis for your Letter Packet. This letter will be sent to the health professional schools to which you will eventually apply, along with the actual letters from your faculty and outside recommenders.

The “Premedical Student Guidelines” is designed to provide a clear and detailed understanding of the involved health career planning process. Use this guide as a planning tool and bring it to all your group meetings and appointments with the Premedical Advisor. Your job is to follow, in a diligent manner, the directives set forth in this manual. I cannot emphasize strongly enough the importance of developing a conscientious, intelligent, and responsible attitude toward your career objective. Of course, you can count on the support of our office as you meet the challenges ahead. Best of luck!

Sincerely,



Eva M. Alonso

Director, Premedical Studies Programs

Co-Chair, Committee of Premedical Studies

Member, National Association of Advisors for the Health Professions (NAAHP)

The “premedical” student, including pre-dental, podiatry, optometry, pre-veterinary and chiropractic has two distinct areas of academic preparation. First, students must fulfill degree requirements and second, they must complete the requirements for admission to health professional school. *All Premed/Pre-Health students must select a major as specified in the undergraduate bulletin.*

ACADEMIC REQUIREMENTS

Listed below are the courses required by the majority of health professional schools in the U.S. Most of these courses should be completed by the end of your junior year and is based on the contents of these courses.

The following courses should be taken at an accredited four year college or university. AP, IB and dual enrolled credit may be used to satisfy these requirements. Students are encouraged to check specific medical/dental school websites for specific information, or they may check with the Premed advisor.

<u>Title</u>	<u>Satisfied by UM Course #</u>	<u>Amount of Time</u>
English*	ENG 105, ENG 106	2 semesters
General Biology w/ Lab Evolution & Biodiversity w/ Lab	BIL 150/151, BIL 160/161	2 semesters
Principles of Chemistry I & II w/Labs	CHM 111/113, CHM 112/114	2 semesters
Organic Chemistry I & II w/ Labs	CHM 201/205, CHM 202/206	2 semesters
College Physics I & II w/ Labs or	PHY 101/106, PHY 102/108 or	2 semesters
University Physics I, II & III w/ Labs	PHY 205, PHY 206/208, PHY 207/209	3 semesters
Biochemistry**	BMB 401 (fall) or BMB 260 (spring)	1 semester
Mathematics***	MTH 161, MTH 162 (BS) MTH 107, MTH 108 (BA)	1-2 semesters

*Students who are waived from ENG 105 based on their SAT or ACT score must take one 200 level literature course to satisfy medical/dental school requirements. ENG 209 will not count towards the fulfillment of this requirement.

**Students may complete this requirement in their senior year; course is needed prior to matriculation at some medical schools: www.dartmouth.edu/~nss/nav/pages/school/Med%20School%20Course%20Reqs/MedSchlBiochemReq08.pdf

Since, the MCAT typically includes Biochemistry questions; it is advisable that students take a Biochemistry course before registering for a MCAT date.

***Students completing a BA degree must take at least MTH 108 or higher in order to fulfill prerequisite for physics.

The above courses should be taken at an accredited four year college or university if you plan to apply to a U.S. medical or dental school(s).

CLINICAL EXPOSURE & SHADOWING EXPERIENCE

Although strong academic preparation is a primary prerequisite in the pre-health student's record, the health professional schools are interested in what you have done to demonstrate your desire to enter this field. You are encouraged to acquire a significant amount of clinical exposure and/or experience in your chosen profession. Many students volunteer at hospitals, clinics, private offices, institutions, hospices, or blood drives, and some students work in a health care environment. Shadowing health professionals in their practices also provides invaluable experience and insight into the profession.

The sources of clinical exposure and experience are unlimited. UM students volunteer at the University of Miami's Health System and Miller School of Medicine, Doctors Hospital, Jackson Memorial Hospital, Miami Children's Hospital, Bascom Palmer Eye Institute, the VA Hospital, Sylvester Comprehensive Cancer Center, Baptist Hospital, Mercy Hospital, the Ryder Trauma Center, South Miami Hospital, and other hospitals and clinics. Students can walk to Doctors Hospital, which is adjacent to campus, and ride the metro-rail to Jackson Memorial Hospital, situated on the medical campus.

Over a period of 3 or 4 years, you want to demonstrate your commitment to exploring the health profession. Additionally, try to arrange for diverse clinical experiences. The intent of this exposure is to increase your awareness of the realities you will face in your chosen health profession. The interaction with practitioners and the observation of all aspects of health care is instructive and essential. **Contact with patients is essential.** Summer, winter, and spring breaks at home or abroad provide additional opportunities to volunteer.

BLACKBOARD SYSTEM AND LIST-SERV

Once you have attended and submitted all of the materials for the premed file at the Premed 101 session, you will receive access to the "**Premed Office**" icon on blackboard (www.courses.miami.edu). The site includes useful resources such as announcements, documents, forums, recommendation letters that have been received by the premed office, volunteer opportunities, and relevant website links. We encourage you to check the site frequently.

To enhance the services of the Premed Office, we have created a list-serv for all students coded with PREMED, PREDENT and PREVET identifiers at the University of Miami. We will be using this service to disseminate important messages and announcements pertaining to our office only.

SUMMER ENRICHMENT PROGRAMS

A number of medical schools and some dental schools offer summer enrichment programs where potential applicants can strengthen their preparation. They typically offer academic course work in areas related to the professional school curriculum. Some offer test preparation and clinical and/or research opportunities and may have links for direct admission into their respective programs. Minority students should ask the premed advisor about the Summer Medical and Dental Education Program (SMDEP) or go to the AAMC website. (<http://www.smdep.org>)

RESEARCH EXPERIENCE

Research involvement will provide you with first-hand experience in the role and methodology of research in medicine, even if your goal is clinical practice. If you are seriously considering a Ph.D. in addition to the M.D. degree, it is imperative that you gain some significant research experience as an undergraduate. University of Miami students are fortunate to have numerous opportunities for research on the Coral Gables campus, at RSMAS, and on the medical campus. Contact individual professors regarding their research, and ask if you can join them either as a volunteer or for academic credit. "Inquiry: The Research Connection" is a student organization which links UM undergraduates to research opportunities throughout the University. The Office of Undergraduate Research also assists in matching students with an appropriate project and mentor. (See Campus Resources p. 23)

EXTRA-CURRICULAR ACTIVITIES

The level of your participation in collegiate activities is more important to professional schools than the number of organizations you join. Commitment, leadership, service, responsibility, and the ability to interact effectively with others are the qualities professional schools look for. Activities of interest to premedical students include service groups, cultural and academic clubs and organizations, employment, athletics, and the arts. **Your involvement need not be exclusively medically related to be meaningful.**

Be aware, however, that no matter how meaningful, extensive involvement in extra-curricular activities will not compensate for mediocre academic performance. It may instead indicate to an admissions committee that you have poor judgment, skewed priorities, and/or inadequate time management skills. **Balance is the key.**

MINORITY ADMISSION TO MEDICAL SCHOOL

Medical schools nationally have programs and resources specifically designed to assist in preparing and recruiting underrepresented students for medical education. The goal is to increase "the number of medical students who are from racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population". (MSAR 2009-2010) Minority students should contact the Minority Recruitment Offices of the medical schools in which they have an interest. Further information check the AAMC website: <http://www.aamc.org/students/minorities/resources/start.htm>

MANDATORY APPLICATION SESSION

In your Junior/Senior year you must attend a **Mandatory Application Session** (sessions are held on select days and times every spring semester) to receive all important information/deadlines for the upcoming application cycle. The dates and location will be sent via the Premed List-Serv and posted on Black Board under the Premed Icon. At the Mandatory Application Session you will also receive the **Student Agreement Form** which you are to complete and submit at the session.

SAMPLE TRACKS FOR MEETING PREMEDICAL REQUIREMENTS

Sample track does not include major, minor, or general education requirements.

**** CONSULT WITH YOUR ACADEMIC ADVISOR ****

TRACK I (BIOLOGY FIRST)

	<u>FALL</u>		<u>SPRING</u>	
Freshman	BIL 150/151	5	BIL 160/161	5
	* MTH 111	4	* MTH 112	4
	ENG 105	3	ENG 106/107	3
Sophomore	CHM 111/113	4	CHM 112/114	4
	PHY 101/106	5	PHY 102/108	5
	** BIL 255	3	** BIL 265	3
Junior	CHM 201/205	4	CHM 202/206	4
	** BIL 250	3		
Senior	** BMB 401 ¹	3	** BMB 258 ¹	

TRACK II (CHEMISTRY FIRST)

	<u>FALL</u>		<u>SPRING</u>	
Freshman	CHM 111/113	4	CHM 112/114	4
	* MTH 111	4	* MTH 112	4
	ENG 105	3	ENG 106/107	3
Sophomore	BIL 150/151	5	BIL 160/161	5
	CHM 201/205	4	CHM 202/206	4
Junior	PHY 101/106	5	PHY 102/108	5
	** BIL 250	3	** BIL 255	3
	** BMB 401 ¹	3		
Senior	** BIL 265	3	** BMB 258 ¹	

TRACK III (CHEM/BIO TOGETHER) ***

	<u>FALL</u>		<u>SPRING</u>	
Freshman	CHM 111/113	4	CHM 112/114	4
	BIL 150/151	5	BIL 160/161	5
	ENG 105	3	ENG 106/107	3
Sophomore	CHM 201/205	4	CHM 202/206	4
	** BIL 250	3	** BIL 255	3
	* MTH 111	4	* MTH 112	4
Junior	PHY 101/106	5	PHY 102/108	5
	**BMB 401 ¹	3	** BIL 265	3
Senior			** BMB 258 ¹	

* Required for BS degree, not for most medical schools

** Recommended

*** For exceptionally strong students

¹ Either BMB 258 or BMB 401
required for some medical schools

SAMPLE TRACK FOR BS IN BIOMEDICAL ENGINEERING

	<u>FALL</u>		<u>SPRING</u>	
Freshman	MTH 110	5	MTH 112	4
	PHY 205	3	PHY 206/208	4
	ENG 105	3	CHM 111/113	4
			ENG 107	3
Sophomore	CHM 112/114	4	CHM 201/205	4
	BIL 150/151	5	BIL 160/161	5
	PHY 207	3	PHY 209	1
Junior			BMB 258	3
			CHM 202/206	4

The Biomedical Engineering, Premed Orientation track is set up so that students receive their engineering degree while meeting all of the course requirements for entrance into medical school. This sample track does not include the engineering courses required for the degree. For more information please visit the College of Engineering's website at: <http://www.miami.edu/engineering/>

SAMPLE TRACK FOR PRE-VET

	<u>FALL</u>		<u>SPRING</u>	
Freshman	ENG 105	3	ENG 106	3
	BIL 150/151	5	BIL 160/161	5
	CHM 111/113	4	CHM 112/114	4
Sophomore	PHY 101/106	5	PHY 102/108	5
	CHM 201/205	4	CHM 202/206	4
Junior	BIL 250	3	MIC 301	4
	* BMB 401	3	MTH 112	4
	MTH 111	4	* BMB 258	

* Either BMB 401 or 258 Required

The University of Florida requires a semester of Animal Nutrition and a semester of Animal Science. These can be taken at UF prior to matriculation.

Premed for Non-Science Majors:

You **do not** need to major in a biological or physical science in order to declare a premed/pre-health track. If you have a real interest and ability in an area outside of the natural sciences, by all means pursue it. You can major and/or minor in the humanities, social sciences, engineering, business, or any other discipline offered at the university. Although many students who apply to health profession school major in the biological sciences, applicants from every academic area can be competitive as long as the program is rigorous and reflects academic excellence. Regardless of your major, your academic curriculum should include some science courses (Biology, Chemistry, Physics, and Mathematics) each semester. As premedical students, you are expected to maintain a full-credit load of at least 15 credits.

BUILDING A PRE-HEALTH FILE

Building Your Premed File: It is important that during the spring term of your freshman year, you must stop by the premed office to sign up for the **Mandatory Premed 101 Group Session** in order to be coded pre-med, pre-dent or pre-vet and pick up the material to open a premed file.

If you transferred to the University of Miami from another institution, you should open your file in the fall semester. Your premed file will serve as the repository for your evaluations for health professional school. *You will need recommendations from professors when applying to a health professional school, whether or not you utilize the services of the premed office.*

I. Opening your Premed file (must submit this material at a Premed 101 Group Session):

- A. Buckley Form:** This is a form on which you choose to waive or do not waive your right to receive evaluations submitted on your behalf. **IMPORTANT NOTE:** If you choose to NOT waive your right Pink Sheets will not be sent out to any UM professor on your behalf.
- B. Wallet/Passport Size Photo:** This is for identification purposes only and it is not sent to professional schools. Your picture is to be submitted when opening your premed file.
- C. Quizzes:** The premed 101 quiz [green] must be completed when opening a premed file. The junior/senior quiz [yellow] will be given to you when scheduling your first formal interview with the premedical director (*during your Junior or Senior year*).

II. Completing your Premed file:

- A. Evaluation Letters:** Once you have opened a file you can begin to solicit letters from faculty and outside recommenders. Students must have a maximum of five-six (5-6) individual evaluation letters on file; they will be included in your letter packet. Make sure the evaluator knows you well, to allow them to give you a great evaluation. We, along with the health professional schools, require that all recommendation letters must be on *official letterhead, signed, dated and must include your complete name.*

All letters of evaluation written by faculty and recommenders are **CONFIDENTIAL**.

Due to space limitations on Black Board no more than 8 letters of recommendation will be accepted: **We do not accept letters hand delivered by a student.**

1. Science Faculty Recommendation letters (3 total)

The following courses are considered "science": BIL, CHM, PHY, MTH, BMB, MIC, NEU, HCS [except for 202, 206, 306 and 317], BME, some Engineering [IEN 311, 312] and some Psychology courses [202, 204, 402, 403 and 420].

All Exercise Science (ESS) majors please consult with the Premedical Director via e-mail or Q&A sessions about using certain courses in your letter packet.

2. Non-Science Faculty Recommendation letter (1 total)

All "non-science" courses [for graded credit only] include: ENG, PSY, REL, THA, JUS, SOC, FRE, SPA, ARB, Business and Communication courses, etc.

Requesting Letters from University of Miami Faculty (PINK SHEET)

You must have taken and received credit for a course with this professor and should give at least 4-6 weeks' notice when asking a faculty member to write a letter on your behalf. Many students are uncertain as to how to get to know faculty members. The easiest way to ask a recommender is:

1. Set-up an appointment with your professor to share with them your career interests, and provide information on your performance in his/her class and/or lab. Do not assume that simply doing well will result in a strong evaluation.
2. Provide supporting materials to help the individual write your letter of recommendation: provide them with a copy of your ACE and/or resume, class materials (e.g., graded papers or other work), and exam scores.

Please Note: *It is very helpful to a recommender to have as much information, in writing, as possible to refer to when they are writing your letter. Providing these details will also ensure that your letters have accurate information regarding your activities.*

Follow this procedure when requesting a recommendation from UM Faculty:

Once you receive the faculty member's consent, visit the Premedical Office and request to complete a "Pink Form" which we, the premed office, send directly to the faculty member. **The following only applies if the premed office is CLOSED** – there is a "REQUEST FOR A PINK SHEET" form (located in the box outside the office and on Black Board). That form is to be filled out and slipped underneath the premed office door or e-mailed as a PDF attachment. The information you list on that form will then be transferred to a PINK SHEET and sent to the faculty member by the premed office. **Please Note:** PINK SHEETS are only sent out if you have a premed file and signed Buckley Form.

3. Outside Recommendation letter(s) (1-2 total)

Letters must be from: your volunteer work, employer(s), physician shadowing, research (non-credited) and extracurricular activities. *Peer letters/Character reference and additional faculty letters will not be accepted for this section.*

Requesting Letters from Professional/Administrative ("Outside") Evaluators

You should give at least 4-6 weeks notice when asking an evaluator to write a letter on your behalf. If a school you are applying to requests that you include a peer letter/character reference letter in your secondary application packet, please have that person send the recommendation letter directly to that institution, it will not be accepted by the premed office. Business cards with our address are available at our office.

To see if your recommendation letter(s) have been returned to the premed office, you can check under the "My Recommendation Letters" tab on the Premed Office Icon on Black Board. If a recommender does not appear, contact your recommender directly to verify the status of your letter(s).

*** Please do not ask the premed office to check if a recommendation letter has arrived for you – this is why the Black Board–Premed Icon service is available to you.*

B. AMCAS/AACOMAS/TMDSAS/AADSAS/VMCAS/AACPMAS Application: Provide us with a complete copy of your submitted application, including the personal statement and designation form. If applicable – you must also provide a copy of your **AMCAS LETTER ID** form with your **AMCAS application**; **TMDSAS Evaluation Form** with your **TMDSAS application**.

APPLICATION SERVICES

Application services process the applications submitted for admission to the various health professions. Applicants submit one set of application materials and official transcripts to the service. Data is then verified before being forwarded to each pre-health institution.

The objective of application services is to provide the participating health professional schools with uniform, readable information on their candidates. Thorough instructions are included with applications. Please remember that a copy of your completed and submitted application is required for us to process your Premedical Advisory Letter Request.

The following is a list of application services:

Allopathic Medicine	AMCAS	American Medical College Application Service (130 schools and programs) www.aamc.org
Osteopathic Medicine	AACOMAS	American Association of Colleges of Osteopathic Medicine Application Service (19 of 21 colleges) www.aacom.org
Dentistry	AADSAS	Associated American Dental School Application Service (54 dental schools) www.adea.org/aadsas
Podiatry	AACPMAS	American Association of Colleges of Podiatric Medicine Application Service (6 out 7 colleges) www.aacpm.org
Veterinary Medicine	VMCAS	Veterinary Medical College Application Service (29 of 35 US colleges) www.aavmc.org
	TMDSAS	Texas Medical and Dental Schools Application Service (6 allopathic medical schools, 1 osteopathic medical school, 3 dental schools and 1 veterinary school) www.tmdsas.org
Chiropractic		The 17 US Chiropractic Colleges each have their own applications. www.chiromed.org , www.vhirocolleges.org
Optometry	OPTED	The 17 Optometry Schools participate in this new application service. www.opted.org

If you plan to apply to schools and colleges that do not subscribe to an application service, you must communicate directly with the Admissions Office of each institution and use their forms. The following is a list of some of the independent medical and dental schools:

NON-AMCAS/TMDSAS

Ponce School of Medicine
 Uniformed Services University of the Health Sciences
 University of North Dakota School of Medicine and Health Sciences
 Canadian medical schools

NON-AADSAS

Louisiana State University
 Medical College of Georgia
 University of Mississippi
 University of Tennessee

ADMISSION GUIDES

Considerable thought should be given to your selected list of schools. The following admission requirement handbooks are valuable resources for formulating your primary list.

- MSAR (Medical School Admission Requirements), AAMC (www.aamc.org)
- Official Guide to Dental Schools, ADEA (www.adea.org)
- Osteopathic Medical College Information Book, AACOM (www.aacom/colleges)
- Veterinary Medical School Admission Requirements, AAVMC (www.thepress.purdue.edu)
- Medical Professions Admission Guide: Strategy for Success, NAAHP (<https://www.naahp.org/publicationsflat.htm>)

STANDARDIZED TESTS

The application process to health professional school usually begins one year prior to matriculation. This cycle begins in the spring of the junior year with the standardized admission tests. Each of the four year health professions (with the exception of chiropractic) requires the completion of a standardized admission test as part of the admission process. The following is a list of the tests required by the various professional programs:

Dentistry	DAT	Dental Admission Test
Allopathic Medicine	MCAT	Medical College Admission Test
Osteopathic Medicine	MCAT	Medical College Admission Test
Podiatry	MCAT	Medical College Admission Test
Veterinary Medicine*	GRE	Graduate Record Exam
Optometry	OAT	Optometry Admission Test
MD/PhD	GRE and MCAT	

** Consult individual veterinary school for specifics (i.e. general or subject test)*

The MCAT is offered several times a year. Test months include January and April through September. Other admission tests can be taken throughout the year. Tests are designed to measure skills and knowledge considered important for successful completion of the professional school curriculum. Students are encouraged to take the MCAT before July whenever possible. The scores will then be

available early in the admission process; however, taking the exam at the optimal time for the evaluation process makes little sense if you have not completed the appropriate course work or test review to perform at your best. Consider reducing your course load during the spring semester of your junior year if you plan to take the admission at that time.

The exams typically include sub-tests which cover inorganic and organic chemistry, biology, physics, science problems, verbal reasoning, and/or a writing sample. The DAT does not test physics but includes a perceptual motor ability sub-test. It is recommended that you take the appropriate test in the calendar year PRIOR to the year that you plan to enter professional school. Therefore you may take the test following your senior year if you plan to take time off after graduation.

Do NOT take a National Standardized Test “to see what its like.” Once taken, scores cannot be withheld. Ideally, a student should take an exam ONCE, although many students do take it twice. They are difficult, challenging tests which require adequate preparation.

OFF SHORE MEDICAL SCHOOLS

An increasing number of students are exploring medical education in foreign medical schools. There are a number of foreign medical schools that are operated abroad but follow a U.S. curriculum. Students who matriculate at these schools are generally those who are unable to gain admission to a U.S. medical school due to non-competitive G.P.A. and/or MCAT scores, immigration issues, etc. Such schools are accredited in the host country, and many are approved for US federal student aid. Students write the USMLE in preparation for licensing in the U.S. A Clinical Skills Assessment (CAS) is also required of foreign medical school graduates. Many of these schools offer clinical training in the U.S. which allows their students to participate in the residency matching program. Students should investigate carefully before embarking on this option and discuss this with the Premedical Director. More information can be found on the Educational Commission for Foreign Medical Graduates website. <http://www.ecfm.org/>

HEALTH PROFESSIONS

Allopathic (MD) and Osteopathic (DO) Physicians and Surgeons

Physicians and surgeons diagnose illnesses and prescribe and administer treatment for people suffering from injury or disease. Physicians examine patients, obtain medical histories, and order, perform, and interpret diagnostic tests. They counsel patients on diet, hygiene, and preventive healthcare.

There are two types of physicians: The Doctor of Medicine (M.D.) and the Doctor of Osteopathic Medicine (D.O.). M.D.'s are also known as allopathic physicians. While both M.D.'s and D.O.'s may use all accepted methods of treatment, including drugs and surgery, D.O.'s place special emphasis on the body's musculoskeletal system, preventive medicine, and holistic patient care.

About a third of M.D.'s and over half of D.O.'s are primary care physicians. They practice general and family medicine, general internal medicine, or general pediatrics and usually are the first health professionals patients consult. Common specialties for D.O.'s include emergency medicine, anesthesiology, obstetrics and gynecology, psychiatry, and surgery.

Surgeons are physicians who specialize in the treatment of injury, disease, and deformity through operations. With patients under general or local anesthesia, a surgeon operates using a variety of instruments to correct physical deformities, repair bone and tissue after injuries, or perform surgeries on patients with debilitating diseases or disorders. Though a large number perform general surgery, many surgeons choose to specialize in a specific area. Surgeons like primary care and other specialist physicians, also examine patients, perform, and interpret diagnostic tests, and counsel patients on preventive healthcare.

Chiropractic Medicine

The Doctor of Chiropractic or Chiropractic Physician (D.C.) diagnoses and treats patients whose health problems are associated with the body's muscular, nervous, and skeletal systems, especially the spine. The chiropractic approach to healthcare is holistic, stressing the patient's overall health and wellness. When appropriate, chiropractors consult with and refer patients to other health practitioners. Chiropractors also employ a postural and spinal analysis common to chiropractic diagnosis.

In cases in which difficulties can be traced to involvement of musculoskeletal structures, chiropractors manually adjust the spinal column. Chiropractors counsel patients about wellness concepts such as nutrition, exercise, lifestyle changes, and stress management, but do not prescribe drugs or perform surgery. Some chiropractors specialize in sports injuries, neurology, orthopedics, pediatrics, nutrition, internal disorders, or diagnostic imaging.

Dentistry

The Doctor of Dental Surgery (D.D.S.) and Doctor of Dental Medicine (D.M.D.) diagnose, prevent, and treat teeth and tissue problems. They remove decay, fill cavities, examine x-rays, place protective plastic sealants on children's teeth, straighten teeth, and repair fractured teeth. They also perform corrective surgery on gums and supporting bones to treat gum diseases. Dentists extract teeth and make models and measurements for dentures to replace missing teeth. They provide instruction on diet, brushing, flossing, use of fluorides, and other aspects of dental care, as well. They also administer anesthetics and write prescriptions for antibiotics and other medications.

Most dentists are general practitioners, handling a variety of dental needs. Other dentists practice in one of nine specialty areas including orthodontics, oral and maxillofacial surgery, pediatric dentistry, periodontics, prosthodontics, endodontics, public health, oral pathology, and oral and maxillofacial radiology.

Optometry

The Doctor of Optometry (OD), also known as Optometrists, provide most primary vision care. They examine people's eyes to diagnose vision problems and eye diseases, and they test patients' visual acuity, depth and color perception, and ability to focus and coordinate the eyes. Optometrists prescribe eyeglasses and contact lenses and provide vision therapy and low-vision rehabilitation. Optometrists analyze test results and develop a treatment plan. They administer drugs to patients to aid in the diagnosis of vision problems and prescribe drugs to treat some eye diseases. Optometrists often provide preoperative and postoperative care to cataract patients, as well as patients who have had laser vision correction or other eye surgery. They also diagnose conditions due to systemic diseases such as diabetes and high blood pressure, referring patients to other health practitioners as needed. (Optometrists should not be confused with ophthalmologists. Ophthalmologists are physicians who perform eye surgery, and diagnose and treat eye diseases and injuries).

Podiatric Medicine

The Doctor of Podiatric Medicine (D.P.M.) treats injuries, deformities and diseases of the ankle, foot, and lower extremities. To treat these problems, podiatrists prescribe drugs, order physical therapy, set fractures, and perform surgery. They also fit orthotics and design plaster casts and strappings and custom-made shoes. Podiatrists may use a force plate to help design the orthotics.

To diagnose a foot problem, podiatrists also order x-rays and laboratory tests. The foot may be the first area to show signs of serious conditions such as arthritis, diabetes, and heart disease. Podiatrists consult with and refer patients to other health practitioners when they detect symptoms of these disorders. Some specialize in surgery, orthopedics, primary care, or public health. Besides these board-certified specialties, podiatrists may practice a subspecialty such as sports medicine, pediatrics, dermatology, radiology, geriatrics, or diabetic foot care.

Veterinary Medicine

**** At the present time the Premed Office does not compile letter packets for Pre-Vet students due to restrictions to the VMCAS application system.**

The Doctor of Veterinary Medicine (D.V.M.) plays a major role in the healthcare of pets, livestock, and zoo, sporting, and laboratory animals. Some veterinarians use their skills to protect humans against diseases carried by animals and to conduct clinical research on human and animal health problems. Others work in basic research, broadening the scope of fundamental theoretical knowledge, and in applied research, developing new ways to use knowledge.

Most veterinarians perform clinical work in private practices. Veterinarians in clinical practice predominately or exclusively treat small animals and diagnose animal health problems, vaccinate against diseases, medicate animals suffering from infections or illnesses, treat and dress wounds, set fractures, perform surgery, and advise owners about animal feeding, behavior, and breeding. A small number of private practice veterinarians work exclusively with large animals. Much of this work involves preventive care to maintain the health of the food animals. They also perform cesarean sections on birthing animals. Veterinarians also euthanize animals when necessary. Other veterinarians care for zoo, aquarium, or laboratory animals.

Veterinarians can contribute to human as well as animal health. A number of veterinarians work with physicians and scientists as they research ways to prevent and treat human health problems, such as cancer, AIDS, and alcohol or drug abuse. Veterinarians who are livestock inspectors check animals for transmissible diseases, examine slaughtering and processing plants, check live animals and carcasses for disease, and enforce government regulations regarding food purity and sanitation.

These health profession abstracts were taken from the U.S. Department of Labor occupational outlook handbook at www.bls.gov.

The health professions listed above generally require the premedical curriculum listed on pg 3. There maybe some differences, however. Consult the websites listed where you can verify the exact requirements for specific programs.

POST-BACCALAUREATE PROGRAMS

Students who feel that their undergraduate preparation is not competitive for admission to medical school may wish to investigate a premedical post-baccalaureate program. These can be degree or non-degree programs which offer premedical requirements for students with non-science degrees or an enhancement curriculum for students who already have a science background. A comprehensive listing of programs can be found on the AAMC website: <http://www.services.aamc.org/postbac/>

UM Post Baccalaureate Career Changer Program:

The post-baccalaureate program at the University of Miami is specifically designed for career changers, ***not for premedical science enhancement***. Students applying to the post-baccalaureate program cannot be currently enrolled in any master's program. Transcripts must show that your undergraduate degree has been posted, and must have obtained a 3.5 GPA or higher during your last 2 years (4 semesters) of your undergraduate studies. Students with lower GPA's may be accepted on a Probationary status. For further information, e-mail us at: postbaccUM@miami.edu

PROFESSIONAL SCHOOLS IN FLORIDA

In general, your best chance for acceptance to a health professional school is in your STATE OF RESIDENCE. The following is a list of health professional schools in the State of Florida:

<u>Allopathic (MD)</u>	Florida Atlantic University College of Medicine Florida International University College of Medicine Florida State University College of Medicine University of Central Florida College of Medicine University of Florida College of Medicine University of Miami Miller School of Medicine University of South Florida College of Medicine	www.med.fau.edu www.medicine.fiu.edu www.med.fsu.edu www.medicine.ucf.edu www.med.ufl.edu www.miami.edu/medical-admissions www.hsc.usf.edu/medicine
<u>Osteopathic (DO)</u>	Lake Erie College of Osteopathic Medicine (Bradenton) Nova Southeastern University College of Osteopathic Medicine	www.lecom.edu www.medicine.nova.edu
<u>Dentistry</u>	Nova Southeastern University College of Dental Medicine University of Florida College of Dentistry Lake Erie College of Dental Medicine (Bradenton)	www.dental.nova.edu www.dental.ufl.edu www.lecom.edu/school-dental-medicine.php
<u>Chiropractic</u>	Palmer College of Chiropractic	www.palmer.edu
<u>Podiatry</u>	Barry University Podiatric Medicine Program	www.barry.edu/gms/podiatry
<u>Veterinary</u>	University of Florida College of Veterinary Medicine	www.vetmed.ufl.edu
<u>Optometry</u>	Nova Southeastern University College of Optometry	www.optometry.nova.edu/

In addition to state schools, you should also consider making application to private institutions receptive to out-of-state applicants. If your credentials (GPA, Admission Test Scores) are highly competitive with the national standards for those accepted, you should apply to reputable institutions nationwide.

UNDERGRADUATE ORGANIZATIONS

The UM Butler Volunteer Services Center has a directory that lists over 200 community service opportunities. *** This is not a complete list. For more information, contact Student Activities and Leadership Programs located in 209 University Center, call 305-284-6399, or go online to Student Life.*

- S.H.A.C.** – Student Health Advisory Committee
- A.E.D.** - Alpha Epsilon Delta, Pre-Health Honor Society
- American Society of Pre-Dental Students**
- A.M.S.A.** - American Medical Students Association
- Beta Beta Beta** - Biology Honor Society
- Biomedical Engineering Society**
- FIMRC** – Foundation for International Medical Relief of Children
- INQUIRY: The Research Connection**
- M.A.P.S.** - Minority Association of Pre-Health Students
- Microbiology and Immunology Club**
- M.W.M.** - Minority Women in Medicine
- Pre-Veterinary Society**
- T.U.N.S.** - The Undergraduate Neuroscience Society
- UM CERT-Canes Emergency Response Team**
- UNITE for Sight for Pre-Optometry Students**

HOW MUCH DOES IT COST TO APPLY TO PRE-HEALTH SCHOOL(S)?

Professional school expenses begin long before you are accepted. Stay on top of deadlines, so you can apply for financial aid or fee assistance when they are available. Here is a sampling of expense items:

MCAT Preparation	Commercial Prep Class	\$2,000.00
	Tutoring	\$80.00/hr
	MCAT on-line Practice	\$80 .00
Test Registration	MCAT	\$210.00
	DAT	\$175.00
	GRE (General)	\$140.00
	OAT	\$195.00
Application Services	AMCAS	\$160.00/1 st school; \$30.00 each addt'l
	AADSAS	\$195.00/1 st school; \$60.00 each addt'l up to 10
	AACOMAS	\$155.00 to \$805.00 for 1- 25 schools
	VMCAS	\$137.00 to \$2,726.00 for 1-31 schools
	TMDSAS	\$55.00 to \$190.00 (# of schools & residency)
Secondary Apps	Varies by school	\$0 - \$150.00
Interviews	Travel	\$250.00+ cost of airfare
	Accommodations	\$100.00+ cost for hotels in large cities
Acceptance Deposits	Varies by school	\$100.00+ and up

UNIVERSITY OF MIAMI MILLER SCHOOL OF MEDICINE REQUIREMENTS

The University Of Miami Miller School Of Medicine **only** accepts U.S. citizens and permanent residents of the United States who have completed a minimum of 90 semester hours of college work exclusive of courses in military science and physical education. Credits earned at foreign institutions are not accepted. Courses specifically required are:

English	2 semesters
Chemistry (with lab)	2 semesters
Organic Chemistry (with lab)	2 semesters
Physics (with lab)	2 semesters
General Biology or Zoology (with lab)	2 semesters
Other Science courses*	2 semesters

* These may be distributed in the *biological sciences, chemistry, physics, or mathematics*. A semester of biochemistry is strongly recommended and may be substituted for one semester of organic chemistry.

The courses shown above constitute the minimum acceptable preparation for the study of medicine at the Miller School of Medicine. Applicants should keep in mind that accepted students have had extensive coursework in the natural sciences, including many of the recommended courses shown: *Biochemistry, Cellular & Molecular Biology, Genetics, Microbiology, Physiology, Immunology, Computer Science, Neuroscience, and Developmental Biology*.

AP and IB credit may be used as part of the 90 semester hour total. However, if you use AP or IB credits in fulfillment of the required courses listed above, it is important that you include advanced courses in these areas for graded credit. CLEP credits are not accepted.

More specific information from the UMMSOM is available at www.miami.edu/medical-admissions.

UNIVERSITY OF MIAMI - MEDICAL SCHOLARS PROGRAM (7-8 year program)

The Medical Scholars Program is a 7-8 year BS/MD program. Admission to the MSP program assures students of a place in the freshman class of the University Of Miami Miller School Of Medicine after completing their third year of undergraduate study, provided they meet the program requirements. MSP students must complete all course requirements for entering medical school and all distribution requirements for graduation. A minimum of 90 semester hours must be accumulated and in no case can the program be shortened to less than three calendar years. It can, however, be extended to four years if the student is in good standing and can present a comprehensive plan for academic and personal enrichment during the additional year. Students usually qualify for the **BS degree before starting medical school or at the end of the first year of their medical studies. Students who meet the following criteria and who have at least a 3.7 GPA at the end of their freshman year are identified by the University and are formally invited to apply to the program.**

To be eligible to apply, students must:

- Be U.S. citizens or permanent residents of the United States (with an alien registration receipt card in their possession at the time of application)
- Be in their fourth consecutive semester of full-time academic work (excluding summer sessions) at the University of Miami
- Must have entered the University with a minimum SAT score of 1300 (ACT 30)

Application Process

Applications and all supporting documents must be received in the Office of Admissions at the School of Medicine by mid-March. An evaluation interview conducted on the medical campus by a member of the Honors Program Committee is an integral part of the application process. However, it should be clearly understood that completing an application form and submitting supporting documents does not, in any way, assure that the applicant will be interviewed. Only those students who, in the opinion of the Committee appear to be the most competitive will be interviewed. The number of applicants invited for interviews will be limited. Interviews are held just before the end of the spring term.

Selection Factors

Selection is based equally on academic merit and on an assessment of a variety of personal factors such as maturity, interpersonal skill level, demonstrated interest in patient care, extent and meaningfulness of patient care experiences, the source and depth of motivation to study medicine, and a history of involvement in campus or community activities, research, or hospital volunteering. Decisions are communicated to applicants in early June, after grades for the spring semester have been posted.

Promotion to the Miller School of Medicine

To be promoted to the Miller School of Medicine, MSP students must have a cumulative GPA of at least 3.7, a science GPA of at least 3.7, and MCAT composite score of at least 30. MSP students must satisfy all distribution requirements for their bachelor's degree before starting medical school.

In addition to these requirements, students must participate in one or more of the following each semester of their third year of study: patient contact and hospital volunteer experiences, research, campus or community service organizations, or study abroad. These experiences must be done over the entire semester and can not be satisfied in less time. Proof that the experience has been undertaken, along with the inclusive dates of participation will be required. Given the purpose of the MSP program, students are greatly encouraged to gain as many patient centered experiences and hospital volunteer experiences as possible. All students must complete a verified AMCAS application, a supplemental application from the Miller School of Medicine, and provide letters of recommendation.

NOTE: The Committee on Admissions for the Medical Scholars Program requires (as part of your application) that you prefer a letter packet from the Premedical Director. If you want a Letter Packet for your Medical Scholars Program application, your premed file and recommendation letters must be into the premed office and complete by March 1st in order for a MSP Letter Packet to be assembled.

Source: www.miami.edu/medical-admissions. Further information about the MSP program may be obtained from the University of Miami Miller School of Medicine (UMMSOM) Office of Admissions at 305-243-3234.

FINAL THOUGHTS FOR THE PREHEALTH STUDENT

Please remember that the Office of Premedical Studies exists to *support* all undergraduates at the University of Miami in the process of seeking admission to health professional school. We want very much to see you succeed and will do whatever we can to assist you. We understand the pressure you are under and we try to diminish your anxiety.

Nevertheless, students are expected to exercise proper etiquette and common courtesies in all interactions with the Premedical Director and staff in our office. This means, in particular, that patience and respect for others are valued commodities as your file is being developed and your Letter Packet is being written and assembled.

If you have questions or concerns during this stressful application process, please refer FIRST to the "Pre-Medical & Pre-Health Guidelines." This guide is comprehensive and addresses almost any problem that may arise. Should an issue remain unanswered, please attend the weekly *Question and Answer Sessions* held only during the fall and spring semesters.

We share your goals and objectives. The best insurance for a positive relationship with the Premed Office is to be knowledgeable about the procedures for requesting interview(s) and letters of recommendation and to demonstrate the kinds of behaviors that suggest the character of an aspiring health professional.

The Premed Office is CLOSED early on Fridays during the summer and fall semester in order to process confidential and time sensitive paperwork. You may send e-mails to the premed office and they will be answered promptly. We appreciate your patience and cooperation.

Best of luck!

The Premed Office



CAMPUS RESOURCES

RESEARCH:

Office of Undergraduate Research and Outreach
Cox Science Center, Room 122
305-284-5058
<http://www.miami.edu/ugr/>

TUTORING:

Academic Resource Center
N-201 Whitten University Center
305-284-2800
<http://www.umarc.miami.edu/>

ASSIGNMENTS AND PERSONAL STATEMENTS:

Writing Center
5225 Ponce de Leon Boulevard
305-284-2956
<http://www.as.miami.edu/writingcenter/>

RESUMES, INTERVIEWS & PERSONAL STATEMENTS:

Toppel Career Center
1306 Stanford Drive
305-284-5451
<http://www.miami.edu/toppel/students/>

COMMUNITY SERVICE:

Butler Volunteer Services
240 Whitten University Center
305-284-GIVE (4483)
<http://www.miami.edu/volunteer-services/>

RELATED WEBSITES

Alpha Epsilon Delta – The Premedical Honor Society (AED)

www.jmu.edu/orgs/nationalaed/

American Association of Chiropractic Colleges

www.chirocolleges.org

American Association of Colleges of Osteopathic Medicine (AACOMAS)

www.aacom.org

American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS)

<http://aacomas.aacom.org>

American Association of Colleges of Podiatric Medicine

www.aacpm.org

American Association of Colleges of Podiatric Medicine Application Service (AACPMAS)

www.aacpm.org

American Chiropractic Association

www.amerchiro.org

American Dental Education Association

www.adea.org

American Medical Association

www.ama-assn.org

American Medical Student Association (AMSA)

www.amsa.org

American Osteopathic Association

www.aoa-net.org

American Public Health Association

www.apha.org

Associated American Dental Schools Application Service (AADSAS)

<http://aadsas.adea.org>

Association of American Medical Colleges

www.aamc.org

Association of Medical Colleges Application Service (AMCAS)

www.aamc.org/amcas

Association of American Veterinary Medical Colleges (VMCAS)

www.aavmc.org

Dental Admissions Test (DAT)

www.ada.org

Graduate Record Exam (GRE)

www.gre.org

Medical College Admission Test (MCAT)

www.aamc.org/mcat

Minority Association of Pre-Health Students (MAPS)

www.snma.org/premedical

Student National Medical Association

www.snma.org

Texas Medical and Dental Schools Application Service (TMDSAS)

www.utsystem.edu/tmdsas

Veterinary Medical College Application Service (VMCAS)

www.aavmc.org

Premed E-mail:
premed@miami.edu

Premed Website:
www.as.miami.edu/premed

UM's Post Baccalaureate Program E-mail:
postbaccUM@miami.edu

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@ UM_PreHealth

Eva M. Alonso

Director of Premedical Studies
and Post Baccalaureate Program

Alixsa Rodriguez

Assistant to Premedical Director
Cover Designer