

**VITERBO UNIVERSITY**

**PRE-HEALTH ADVISING  
HANDBOOK**



## Table of Contents

<a href="#">Overview</a> .....	4
<a href="#">Is a health career right for you?</a> .....	4
<a href="#">Post- baccalaureate health professions</a> .....	4
<a href="#">Deciding which career is best for you</a> .....	10
<a href="#">A Portrait of a Pre-health Student</a> .....	11
<a href="#">Pre-health Requirements</a>	
<a href="#">Medical/Osteopathic Schools</a> .....	12
<a href="#">Dental School</a> .....	14
<a href="#">Optometry School</a> .....	15
<a href="#">Podiatry School</a> .....	15
<a href="#">Veterinary School</a> .....	15
<a href="#">Pharmacy School</a> .....	16
<a href="#">Physician Assistant Programs</a> .....	16
<a href="#">Anesthesiologist Assistant</a> .....	17
<a href="#">Pathologists' Assistant</a> .....	17
<a href="#">Physical Therapy School</a> .....	17
<a href="#">Occupational Therapy School</a> .....	17
<a href="#">Clinical/Medical Laboratory Scientist</a> .....	18
<a href="#">Audiologist</a> .....	18
<a href="#">Genetic Counselor</a> .....	18
<a href="#">Chiropractic School</a> .....	18
<a href="#">Academic Record</a> .....	18
<a href="#">Realistic Understanding of the Profession</a> .....	19
<a href="#">Commitment to Service</a> .....	19
<a href="#">Leadership Experience</a> .....	19
<a href="#">Research Experience</a> .....	19
<a href="#">4-Year Planning Guide</a> .....	20
<a href="#">Freshman year</a> .....	20
<a href="#">Sophomore year</a> .....	20
<a href="#">Junior Year</a> .....	21
<a href="#">Senior Year</a> .....	21
<a href="#">Entrance Exams</a> .....	22
<a href="#">MCAT</a> .....	22
<a href="#">PCAT</a> .....	25
<a href="#">DAT</a> .....	26
<a href="#">OAT</a> .....	28
<a href="#">GRE</a> .....	29
<a href="#">Application Process</a> .....	29
<a href="#">Commonly Asked Questions</a> .....	30

<a href="#">References</a> .....	42
<a href="#">Appendices</a> .....	43

## OVERVIEW

### IS A HEALTH PROFESSIONS CAREER FOR YOU?

Pre-health professions is a generic term that includes pre-medicine, pre-dental, pre-optometry, pre-podiatry, pre-veterinary, pre-chiropractic, pre-physical therapy, pre-occupational therapy, and pre-pharmacy students among others. Viterbo (and most other schools) do not offer a major in “pre-med” or one of the other health professions, but rather uses these terms as identifiers that help us track your academic progress and your career goals. The Viterbo Pre-Health Advising Committee works in conjunction with pre-health professions students to help them achieve their goals of acceptance into an accredited program. As you may know, admission into one of these health professions programs is quite competitive and you should be truly committed to becoming a health professional if this is your passion. Early on in your undergraduate career, you should explore different health professions and decide if you can be sufficiently dedicated to achieving that goal. Plan to start strong, set clear priorities, make mature (and sometimes difficult) decisions, and use study time effectively. We are here to help you do that throughout your time at Viterbo and help you achieve your goal of a health professions career. Starting with your first semester in our Science Success course, we start to help you explore your options while working towards your goals.

To start you on your path, please review this useful site on [exploring health careers](#).

### POST-BACCALAUREATE HEALTH PROFESSION

When considering a career in the health professions, it is important that you explore all the career alternatives available. Below is a short description of the health professions students typically pursue. Most require post-baccalaureate training and result in a doctorate or a master's degree. You can enter some of these programs after 90 credits of undergraduate work, though even if this option is available these students are not always as competitive. Additionally, Viterbo has 3+ agreements (which allow you to enter those schools after 3 years at Viterbo, and receive your Viterbo degree after a year in that program) and early admissions with several programs. You can see [this link](#) for various articulation agreements we provide. Please ask the pre-health coordinator for additional details on these programs. It is very important that as you identify your career goals you specifically seek out the admission requirements for those select schools to which you are likely to apply. Different schools will have differing requirements and check those websites often as pre-requisite courses and other admissions requirements may change. It is your responsibility to meet all the admission requirements.

#### MEDICINE (ALLOPATHIC):

A physician trained in allopathic medicine is what most people think of when they imagine a 'doctor'. Generally, an allopathic physician's responsibilities include diagnosing disease, supervising the care of patients, and prescribing treatment. Students completing a four-year allopathic medical program earn the degree of *Doctor of Medicine (M.D.)*. Medical doctors pursue graduate medical education (internship and residency) in a specialty after completing the M.D. This residency time takes on average 3-5 years (though some surgery programs may take longer). Additional training may also occur in subspecialties for another 1-3 years. For example, a pediatric rheumatologist would perform a three-year residency in pediatrics followed by a two-year fellowship in pediatric rheumatology to become fully certified. Medical schools require the MCAT for admission. Mean scores on the MCAT are generally ~126 on each of the four sections, with an overall score ~505. Typical admissions averages for medical school: mean overall GPA: ~3.7; mean science GPA: ~3.5; mean non-science GPA ~3.7. Up to date applicants and matriculants data can be found [here](#).

Salary ranges depends on specialty. The United States Department of Labor projects about a 13% increase in growth from 2016-2026. Updated job outlook data can be found [here](#). The Association of American Medical Colleges [AAMC Pre-Med Brochure](#) provides information with paths to med schools. [Tools and Tutorials](#) for pre-med students are also available from AAMC.

#### OSTEOPATHIC MEDICINE:

A *Doctor of Osteopathic Medicine (D.O.)* diagnoses disease, supervises the care of patients, and prescribes treatment. Osteopathic medicine has much in common with allopathic medicine. However, osteopathic physicians have a somewhat different philosophy, sometimes described as total body medicine, and the use of an additional treatment—manipulative therapy—in conjunction with traditional allopathic therapies, such as medication. The D.O. degree involves four years of study, followed by a one-year internship. The internship is followed by two to six years of residency training if a specialty is desired. The majority of D.O.s practice in a primary-care setting, particularly family practice. Osteopathic schools require the MCAT for admission. Scores on the MCAT are similar to allopathic medicine, with means generally just above 125 on each of the four sections, with an overall score ~502. Typical admissions averages: mean overall GPA: ~3.5; mean science GPA: ~3.4; mean non-science GPA ~3.6. The United States Department of Labor projects about a 13% increase in growth from 2016-2026. Updated job outlook data can be found [here](#). The American Association Colleges of Osteopathic Medicine ([AACOM](#)) provides information on application requirements, descriptions of careers in osteopathic medicine, and programs in the U.S.

Viterbo University has current articulation and early acceptance programs with LECOM. For more details see a pre-health committee member and visit LECOM at <https://lecom.edu/>

Here is an article to help you as you consider your medical school choices "[Selecting a Medical School: 35 Questions I Wish I Had Asked](#)"

#### DENTISTRY:

Dentistry is devoted to maintaining the health of the teeth, gums, and other hard and soft tissues of the oral cavity. Most dentists engage in general practice, bringing skills in oral diagnosis, prevention, and rehabilitation directly to the patient. Students completing a dental program earn one of two equivalent degrees: *Doctor of Dental Medicine (D.M.D.)* or *Doctor of Dental Surgery (D.D.S.)*. The majority of dentists begin practice immediately after the four-year dental program, although some pursue one year or more of post-graduate study. There is a predicted dentist shortage in Wisconsin and most students can take over a practice or join an established practice immediately on graduation. Typical admissions averages: mean overall GPA: ~3.5; mean science GPA: ~3.3. Dental schools require the DAT for admission. Generally, the mean score of accepted applicants is about 20 on the DAT. The U.S. Department of Labor predicts that the dental profession will grow by 19% from 2016–2026. Updated job outlook data can be found [here](#). Information about dental schools is available at the American Dental Education Association <http://adea.org/>.

Viterbo University has current articulation and early acceptance programs with LECOM. For more details see a pre-health committee member and visit LECOM at <https://lecom.edu/>

#### OPTOMETRY:

Optometrists are primary healthcare providers who diagnose, manage, and treat conditions and diseases of the human eye and visual system. A *Doctor of Optometry (O.D.)* completes a four-year program, and the majority enter general practice upon earning the O.D. Optometry schools require the OAT for admission. Average academic OAT scores range from ~302 to ~358, with an overall average ~325. Typical admissions averages for optometry range greater

by school than others and data on GPA and the OAT can be found at ASCO (see below). However, typical admissions averages include a mean overall GPA: ~3.5. The U.S. Department of Labor predicts that the profession will grow by 18% from 2016–2026. Updated job outlook data can be found [here](#). The American Optometric Association ([AOA](#)) and Association of Schools and Colleges of Optometry ([ASCO](#)) provide information on application requirements, descriptions of careers, and programs in the U.S.

#### PODIATRY:

Podiatrists are concerned with the prevention, diagnosis, and treatment of diseases and disorders affecting the human foot and other parts of the lower extremity below the knee. Podiatrists use a variety of medical, surgical, and manipulative techniques to treat the foot. A *Doctor of Podiatric Medicine (D.P.M)* completes a four-year medical education at one of seven schools, and in most states a two-year or three-year surgical residency. Podiatrists may subsequently specialize in podiatric surgery, orthopedics, podiatric sports medicine or other areas. Typical admissions averages: mean overall GPA: ~3.3; mean science GPA: ~3.2; mean non-science GPA ~3.5. Podiatry schools require the MCAT for admission. Generally, the mean score of accepted applicants is between 123 and 124 on each of the four sections of the MCAT for an overall average of ~495. The U.S. Department of Labor predicts that podiatry will grow by 10% from 2016–2026. Updated job outlook data can be found [here](#). The American Podiatric Medical Association ([APMA](#)) and American Association of Colleges of Podiatric Medicine ([AACPM](#)) provide information on application requirements, descriptions of careers, and programs in the U.S.

#### VETERINARY MEDICINE:

Veterinarians are trained to diagnose, treat and help prevent disease and disabilities in animals. Veterinarians serve the needs of the public by practicing preventive medicine in relation to both human and animal health, the solution of agricultural and wildlife problems, and humane care of companion animals. A *Doctor of Veterinary Medicine (D.V.M)* completes a four-year medical education. Most veterinarians enter practice upon completion of the D.V.M., although some pursue post-graduate training or specialization. Typical admissions averages: mean overall GPA: ~3.55. Most veterinary schools require the GRE for admission with average percentile scores of: Verbal ~66; Quantitative ~58, and Writing ~56. As of 2018, there were only 30 veterinary schools in 27 states so the competition is especially intense. The U.S. Department of Labor predicts that the profession will grow by 19% from 2016–2026. Updated job outlook data can be found [here](#). The Association of American Veterinary Medical Colleges ([AAVMC](#)) provides information on application requirements, descriptions of careers, and programs in the U.S.

#### PHARMACY:

Pharmacists are an integral part of the primary healthcare system. They educate patients about different medications and serve to ensure safe administration of drugs. Pharmacists also serve to advise other healthcare providers about drug treatment plans, monitor drug therapy, and they may do research and clinical studies. A *Doctor of Pharmacy (Pharm.D.)* completes a four-year program. A majority of graduates work in community pharmacy or in large retail pharmacy. However, pharmacists may also choose from many specialized fields and/or perform clinical research. Most pharmacy schools require the PCAT for admission. Typical admissions averages for pharmacy range greater by school than others and data on GPA and the PCAT can be found at AACP (see below). However, typical admissions averages for high-quality programs in the Midwest include a mean overall GPA: ~3.4-3.5 and percentile scores on the PCAT of greater than 75%. Other (often newer) programs may allow lower GPAs and PCAT scores. The U.S. Department of Labor predicts that the profession will grow by 6% from 2016–2026. Updated job outlook data can be found [here](#). The American Association of Colleges of

Pharmacy ([AACP](#)) provides information on application requirements, descriptions of careers, and programs in the U.S.

Viterbo University has current articulation and early acceptance programs with LECOM. For more details see a pre-health committee member and visit LECOM at <https://lecom.edu/>. Some schools also offer distance-learning opportunities to obtain a Doctor of Pharmacy degree, see below for two examples:

<https://spahp.creighton.edu/admission/pharmacy/pharmd-distance-pathway>

<http://schoolpages.pharmacas.org/publishedsurvey/2212>

#### PHYSICIAN ASSISTANT:

Physician assistants (PAs) are part of the healthcare team that provides basic medical care under the supervision of a physician. They take medical histories, perform examinations, treat patients, see to minor injuries, prescribe medication, order lab work and interpret results. Physician assistants provide diagnostic, therapeutic and preventative health services. At a practice level, PAs are very similar to nurse practitioners (NP). However, PAs are educated in general medicine, which offers a comprehensive view of all aspects of medicine. On the other hand, NPs must choose a “population focus,” e.g., pediatric nurse practitioner or women’s health nurse practitioner. Also, PAs are trained to practice medicine using a curriculum modeled on medical school education. Whereas, NPs are trained in the advanced practice of nursing and requires a time of working as a general practice registered nurse prior to becoming an NP. A PA usually completes a 2-3 year program, which may begin immediately after earning an undergraduate degree. Graduates earn master’s degrees in either Physician Assistant Studies (MPAS), Health Science (MHS), or Medical Science (MMSc). Some physician assistants work in hospitals or a group practice with physicians. In many rural or medically underserved areas, physician assistants may serve as the primary healthcare provider in the community. UW–La Crosse has a PA program affiliated with Mayo Clinic. Typical admissions averages for PA schools: mean overall GPA: ~3.5; mean science GPA: ~3.4; mean non-science GPA ~3.6. Most physician assistant schools require the GRE, with percentile scores greater than 55% being typical of accepted students. The U.S. Department of Labor predicts that the profession will grow by 37% from 2016–2026. Updated job outlook data can be found [here](#). The Physician Assistant Education Association ([PAEA](#)) and American Academy of Physician Assistants ([AAPA](#)) provide information on application requirements, descriptions of careers, and programs in the U.S. The following link provides a useful PA timeline and planning tool <http://hpplc.indiana.edu/ohp/YourPreprofessionalTimeline.shtml>.

#### ANESTHESIOLOGIST ASSISTANT:

Anesthesiologist assistants (AAs) are highly educated allied health professionals who work under the direction of an anesthesiologist to help implement the anesthetic plan as prescribed by the anesthesiologist. AAs are trained through master’s degree professional programs in the delivery and maintenance of quality anesthesia care as well as advanced patient monitoring techniques. AAs can be thought of as similar to physician assistants, except that they work exclusively with anesthesiologists and practicing independently or in a primary care setting is NOT included in the AAs scope of practice. AAs usually practice in a hospital setting that uses an Anesthesia Care Team approach and are always supervised by anesthesiologists. The profession maintains a typical work week with options for on-call, evening or weekend assignments. Salaries, scope of practice and job descriptions are identical to certified registered nurse anesthetists when working within the Anesthesia Care Team. Starting salaries vary by region but typically range from \$110,000–\$120,000. As of 2018, there were only 11 anesthesiologist assistant programs in the nation, however one of the 11 is in Milwaukee and there are several others in the Midwest. Typical admissions averages for AA may range by school. However, typical admissions averages for the Medical College of Wisconsin (MCW)

include a mean overall GPA: ~3.5; mean science GPA: ~3.4. AA programs may require the GRE or MCAT. MCW's typical average test scores are GRE Verbal ~153, GRE Quantitative ~156, and MCAT overall ~499. Job outlook can be considered similar to Physician Assistant and the U.S. Department of Labor predicts that the profession will grow by 37% from 2016–2026. Updated job outlook data can be found [here](#). The American Association of Anesthesiologist Assistants ([AAAA](#)) provides information on application requirements, descriptions of careers, and programs in the U.S.

#### PATHOLOGISTS' ASSISTANT:

A pathologists' assistant provides various services under the direction and supervision of a pathologist. Pathologists' assistants interact with pathologists in a manner similar to physician's assistants in surgical and medical practice and anesthesiologist assistants in anesthesiology, carrying out their duties under the direction of their physicians. Pathologists' assistants are trained to provide accurate and timely processing of a variety of laboratory specimens, including the majority of pathological specimens for diagnostic tests. They are responsible for gross examination and dissection of anatomic pathology specimens and perform postmortem examinations. Admission to Pathologists' Assistant programs is competitive, with only 12 programs in the nation, however there are nearby programs in Chicago and Detroit. Programs are 22-24 months with the first year consisting of didactic coursework and the second year is a clinical rotation through several affiliated hospitals. Admission requires a bachelor's degree. Many programs require the GRE and percentile scores above 50% are typical. Typical GPA averages are greater than 3.0, but not as high as the other pre-health programs above. Job outlook can be considered similar to Physician Assistant and the U.S. Department of Labor predicts that the profession will grow by 37% from 2016–2026. Updated job outlook data can be found [here](#). The American Association of Pathologists' Assistants ([AAPA](#)) provides information on application requirements, descriptions of careers, and programs in the U.S.

#### PHYSICAL THERAPY:

Physical therapists (PTs) diagnose and treat individuals from newborns to the very oldest who have limitations in their ability to move and perform functional activities as well as they would like in their daily lives. They work with patients to regain or maximize movement in major extremities or regions of the body relating to the major extremities. Physical therapists examine each individual and develop a treatment plan to promote the ability to move, reduce pain, restore function, and prevent disability. In addition, PTs work with individuals to prevent the loss of mobility before it occurs by developing fitness and wellness-oriented programs for healthier and more active lifestyles. A student in a *Doctor of Physical Therapy (D.P.T.)* program usually completes a three year program. There are many areas of specialization for physical therapists to choose from and a wide variety of clinical settings to practice. Many specialties require residency programs after completion of the D.P.T. Most schools require the GRE for admission. Typical admissions averages: mean overall GPA: ~3.6; mean science GPA: ~3.4. Typical GRE scores of accepted applicants include percentile scores of Verbal ~52%, Quantitative ~46%, and Analytical ~56%. The U.S. Department of Labor predicts that the profession will grow by 28% from 2016–2026. Updated job outlook data can be found [here](#). The American Physical Therapy Association ([APTA](#)) provides information on application requirements, descriptions of careers, and programs in the U.S. The following link provides a useful PT timeline and planning tool <http://hpplc.indiana.edu/ohp/YourPreprofessionalTimeline.shtml>.

#### OCCUPATIONAL THERAPY:

Occupational therapists (OTs) help patients improve their ability to perform tasks in living and working environments. They work with individuals who suffer from a mentally, physically, developmentally, or emotionally disabling condition and usually have a strong educational background in the social and behavioral sciences. This provides the skills and knowledge for



them to help patients physically, emotionally and psychologically deal with injury and recovery. A master's degree or higher in occupational therapy is the typical minimum requirement for entry into the field. There are many areas of specialization for occupational therapists to choose from and a wide variety of clinical settings to practice. Typical admissions averages for OT schools range greater by school than others and several target schools' admissions averages should be researched. However, typical admissions averages for high-quality programs in the Midwest include a mean overall GPA: ~3.5-3.7. The U.S. Department of Labor predicts that the profession will grow by 24% from 2016–2026. Updated job outlook data can be found [here](#). The American Occupational Therapy Association ([AOTA](#)) provides information on application requirements, descriptions of careers, and programs in the U.S. The following link provides a useful OT timeline and planning tool <http://hpplc.indiana.edu/ohp/YourPreprofessionalTimeline.shtml>.

#### Clinical/MEDICAL Laboratory Scientist:

Clinical Laboratory Scientists (CLS) (also known as Medical Laboratory Scientists) work with state-of-the-art equipment to analyze a variety of biological specimens. CLS personnel are responsible for performing scientific testing on samples and reporting the results to physicians. About 60 to 70% of all decisions about a patient's diagnosis, treatment, and hospital admission and discharge are influenced by laboratory test results. Clinical Laboratory Scientists collaborate very closely with physicians in diagnosing and monitoring disease processes, as well as monitoring the effectiveness of therapy. Areas of clinical laboratory training include microbiology, chemistry, hematology, immunology, transfusion medicine, toxicology, and molecular genetics. CLS professionals have completed a bachelor's degree and generally a one-year certification program. CLS must pass national certification exam, which qualifies them to work in all parts of the medical laboratory. One of the top programs in the nation is located at Mayo Clinic in nearby Rochester, MN. The U.S. Department of Labor predicts that the profession will grow by 13% from 2016–2026. Updated job outlook data can be found [here](#). The American Society for Clinical Laboratory Science ([ASCLS](#)) provides information on application requirements, descriptions of careers, and programs in the U.S.

#### AUDIOLOGIST:

Audiologists examine individuals of all ages and identify those with the symptoms of hearing loss and other auditory, balance, and related sensory and neural disorders. They then assess the nature and extent of the dysfunction and assist patients in the treatment and management of their disorder. Audiologists earn the Doctor of Audiology (Au.D.) degree, as this is the entry-level degree for clinical practice. Requirements for admission to programs in audiology include courses in English, mathematics, physics, chemistry, biology, psychology, and communication. The U.S. Department of Labor predicts that the profession will grow by 21% from 2016–2026. Updated job outlook data can be found [here](#). Median annual wages of audiologists were \$75,920 in 2018. The Academy of Doctors of Audiology ([ADA](#)) and [American Academy of Audiology](#) provide information on application requirements, descriptions of careers, and programs in the U.S.

#### GENETIC COUNSELOR:

Genetic counselors are professionals who have specialized education in genetics and counseling to provide personalized help patients may need as they make decisions about their genetic health and how genetic conditions may affect their families. Genetic counselors have advanced training in medical genetics and counseling to interpret genetic test results to guide and support patients. Genetic counselors typically receive a bachelor's degree in biology, social science or a related field, and then go on to receive specialized training via a Master's degree in genetic counseling. Typical admissions averages: mean overall GPA: ~3.5. Genetic counseling programs require the GRE, with percentile scores 60-70% being typical of accepted students.

The U.S. Department of Labor predicts that the profession will grow by 29% from 2016–2026. Updated job outlook data can be found [here](#). The National Society of Genetic Counselors ([NSGC](#)) provides information on application requirements, descriptions of careers, and programs in the U.S.

#### CHIROPRACTIC:

A *Doctor of Chiropractic (D.C.)* is an alternative medicine health professional who gives particular attention to the relationship of the structural and neurological aspects of the body in health and disease. Chiropractic treatment includes spinal adjusting, manipulation, physical modalities, and rehabilitation. It is possible for students to enter many chiropractic programs after 90 credit hours of pre-professional education, though about 65% of students entering chiropractic schools have bachelor's degrees. Many states require students to have a bachelor's degree to practice. The Association of Chiropractic Colleges ([ACC](#)) provides information on application requirements, descriptions of careers in chiropractic, and programs in North America. Viterbo University has an articulation agreement with Logan College of Chiropractic and Palmer College of Chiropractic that allows you to enter those schools after 3 years at Viterbo. After successful completion of your first year, Viterbo will transfer in your credits and you will be granted an undergraduate degree from Viterbo. The United States Department of Labor projects about a 12% increase in growth from 2016-2026. Updated job outlook data can be found [here](#).

These are some of the most common health related professions. There are more options to explore and you can work with your academic advisor or the Career Center for other areas.

#### DECIDING WHICH CAREER IS BEST FOR YOU

Please review this useful site on [exploring health careers](#)

One thing to keep in mind for whatever career you decide to pursue is this: you might face choices that force you to mature early and choices that are not necessarily popular with your peer group. For example, you may have to study for an exam rather than go out with friends because you need to keep your grades up.

To help you decide on a career path, ask yourself why you want to pursue a particular health profession. Answer this question with a number of specific, concrete reasons. Remember: this is a question you will be asked by admissions committees of the health profession programs to which you apply. So, give it some thought. If you have trouble coming up with concrete reasons why this health profession will suit you, try to complete this sentence: "I want to be an optometrist (doctor, veterinarian, etc.) because..." The answer "...because I've always wanted to" does NOT answer why you have wanted to. The answer "...because I want to help people" DOES answer why, but only in a very general way. If you want to help people, why the specific health profession you have chosen? You can also help people by being a fireman, a teacher, or a paramedic. Why not pursue a career in one of those areas? Why not another post-baccalaureate health profession (dentistry or podiatry or chiropractic)? You must also be able to answer, "How do I know I am making the right choice?" and "What motivates me toward my choice in a healthcare profession?" Everyone granted an interview at a professional school will have strong academics and standardized exam scores. Also think about what makes YOU special. What unique attributes do you bring to an incoming class? Highlighting what makes YOU special is what will help you get the interview or acceptance.

Answering these questions thoroughly will probably take some time. Take the time to reflect on how you explored the career and on the experiences you have had that led you to making your choice (what makes you special). As you prepare for the health profession, you should be evaluating these questions. Ideally, your choice of a health profession should be the result of thoughtful and thorough career decision-making. Such career decision-making includes:

1. *SELF-ASSESSMENT*: Understanding what you enjoy, what you are good at, and what you want from your career. You need to answer questions such as: "How many hours a week do I want to work?" and "How much pressure do I want in my career?" or "What sort of practice do I want to have?" Even, "will I want to work nights and weekends?" Keep a journal and write down your thoughts in these areas. Examine and evaluate your talents, skills, personal strengths and weaknesses as well as your academic strengths and weaknesses. The Career Center can help you identify careers that meet your strengths.

Viterbo's Career Planning and Placement office can help you by having you complete the MBTI or some other assessments. Contact Beth Dolder-Zieke ([bdzieke@viterbo.edu](mailto:bdzieke@viterbo.edu)) to set up an appointment.

2. *EXPLORING ALTERNATIVES* : Look at all the careers that match your career goals as determined by your self-assessment. You will probably come up with careers that you may have never thought about. Research and consider them all. Don't assume you know about a specific career. Unless you have actually worked in that career, you probably have assumptions about it that may or may not be true. Find out the REALITY of each career. You can do so by reading about it, talking to people who are active in the field, and by observing people who are currently in practice. However, the BEST way to learn about any career is to shadow someone already in that field or to volunteer at a healthcare facility related to the field of your interest. Keep a journal to help you keep track of your thoughts and experiences as you are exploring these careers. Often one of these experiences can form the basis for your personal statement.
3. *DECIDING AND DEVELOPING A PLAN*: After you have researched career alternatives, rank the three that seem to come closest to fulfilling your needs. Develop Plan A, a plan for preparing for your best career match. Also develop a Plan B, or a way to take a new approach to your first career choice if you are unsuccessful on your first attempt. Your academic advisor can help with this process. Finally, have a plan C or a plan for attaining a satisfactory alternative. Plan C is important because you may find that you change your mind about pursuing Plan A, or you are unsuccessful in your pursuit of Plan A.

This may sound like a long process requiring effort on your part. Remember, this is your life and potential for a 40 year career that you are making decisions about. In the long run you will probably be glad you took the time for careful thought. In addition, if you end up pursuing a health profession as a result of thorough decision-making, your commitment and motivation will likely be much stronger. You will find that you are more effective in writing statements for your professional school applications and answering questions about your dedication to the profession in interviews.

### **A Portrait of a Pre-health Student**

The health professions are looking for students who have the academic potential to succeed in a rigorous, science-based professional program, AND the personal potential to be a competent and compassionate health professional (exhibiting qualities such as trustworthiness, maturity, integrity, altruism, and dedication).

Many of these qualities are intangible and difficult to measure objectively, but are often addressed in letters of recommendation. Therefore, professional schools look at a number of factors of each applicant that may approximate that applicant's potential. Below are listed the characteristics most professional schools look at when attempting to evaluate an applicant's potential.

For **academic potential**, professional schools attempt to determine:

- Has the applicant successfully completed the necessary prerequisite courses?
- Has the applicant demonstrated that he/she can handle a challenging science course load?
- What grades has the applicant earned in his/her courses? What was the trend?
- Has the applicant completed an undergraduate degree? (Although, this is not a requirement for some programs)
- What scores has the applicant attained on the admission test?
- Has the applicant pursued a challenging overall post-secondary curriculum?

In attempting to evaluate **personal potential**, professional schools look at:

- Does the student have a broad academic background?
- Has the student attempted research? (not as emphasized in some programs)
- What experience does the applicant have in health care?
- What interests outside of academics does the applicant pursue?
- How does the applicant present him/herself in writing (in the Personal Statement)?
- How does the applicant present him/herself in person (in the interview)?
- How do others view the applicant (demonstrated in letters of reference), particularly compared to other pre-professional students?

Because admission to professional school is generally **very** competitive, you want to demonstrate excellence in **every area** that professional schools will consider. **It is important to note that achieving an above-average GPA and test scores in no way guarantees acceptance**, though GPA and test scores significantly below average DO make it highly UNLIKELY to be accepted. Be sure to know the average ranges for the various career paths you have planned.

## Pre-Health Requirements

**NOTE:** Most of the information available is geared toward medical schools. While following the premed curriculum will meet most entrance requirements for the various health professions, you should check with each school to which you will apply and verify their entrance requirements. It is your responsibility to stay current on specific pre-requisite requirements. In this section, specific information is given for the different health professions where it applies.

### Medical/Osteopathic Schools

Most medical and osteopathic schools have the same standard course requirements, which are also the same as the courses recommended before taking the MCAT. However, you should check with the schools to which you are applying and verify their specific requirements. You can also consult the [Medical School Admission Requirements](#) (MSAR) book published by the American Association of Medical Colleges to verify the requirements.

The standard prerequisite courses are changing a bit as schools review which requirements help prepare students for success. This may also drive changes in pre-requisite courses for medical schools. All pre-requisite courses include a lab and should be courses designed for science majors. The courses traditionally required are:

Biology	8 semester hours (some now require 4 credits of advanced biology as part of the 8 hours)
General Chemistry	8 semester hours
Organic Chemistry	8 semester hours (some schools require biochem in place of one semester of organic chem)
General Physics	8 semester hours
English	6 semester hours
Mathematics (through college algebra)	

For [University of Wisconsin School of Medicine and Public Health](#), requirements for medical school admission are (course, semesters)

General Biology (1 with lab)	2
Advanced Biology (with lab)	1
Inorganic/General Chemistry (with lab)	2
Organic Chemistry	1
Biochemistry	1
Physics (with lab)	2
Statistics	1
Humanities or Social Sci (writing)	1

For the [University of Minnesota Medical School](#), requirements for medical school admission generally include (course, semesters)

General Biology (with lab)	1
Chemistry with lab (gen or organic)	1
Additional Life Sciences	4
Humanities/Social Sciences	1

Recommended: ethics, biochemistry, genetics, psychology, statistics, foreign language, seminar courses involving small group discussions, independent learning courses, behavioral and social sciences, and humanities.

Other undergraduate courses that medical students have found helpful in preparing them for medical school are reported in the table below ([Medical School Graduation Questionnaire](#), All Schools Report, Division of Medical Education, AAMC)

Table 1 -- How important were the following premedical courses in preparing you for medical school (2011 data)?

Course	Ratings (%)				
	Very Important	Moderately Important	Somewhat Important	Slightly Important	Not Important
Biology	57.3	25.3	11.6	4.7	1.1
General Chemistry	17.6	32.8	29.0	16.9	3.7
Organic Chemistry	14.0	27.0	27.2	22.1	9.7
Physics	9.2	23.1	30.9	26.2	10.7
Anatomy	36.5	30.0	17.1	8.5	7.9

Biochemistry	48.3	31.6	12.8	5.2	2.1
Genetics	36.3	38.5	17.5	5.9	1.8
Physiology	68.6	20.4	6.9	2.3	1.7
Psychology	11.9	26.9	29.1	21.1	10.9

Specific courses offered at Viterbo that meet the requirements above:

### **Biology**

Biology 160	General Biology I	4 cr/sh
Biology 161	General Biology II	4 cr/sh
Biology 305 or 370	Biochemistry	3 or 4 cr/sh
Biology 347	Human Physiology	4 cr/sh
Biology 430	Genetics	4 cr/sh
Biology 482	Human Anatomy	4 cr/sh

### **Chemistry**

Chemistry 120	General Chemistry I	4 cr/sh
Chemistry 121	General Chemistry II	4 cr/sh
Chemistry 240	Organic Chemistry I	4 cr/sh
Chemistry 340	Organic Chemistry II	4 cr/sh
Biology 305 or 370	Biochemistry	3 or 4 cr/sh

### **Physics**

Physics 250/270	General Physics I	4 cr/sh
Physics 251/271	General Physics II	4 cr/sh
OR		
Physics 260/270	University Physics I	4 cr/sh
Physics 261/271	University Physics II	4 cr/sh

### **English**

English 103	Composition I	3 cr/sh
English 104	Composition II	3 cr/sh
OR		
English 105	Accelerated Comp	4 cr/sh

### **Mathematics**

Math 112	College Algebra	3 cr/sh
Math 113	Trigonometry	3 cr/sh
Math 220	Calculus I	4 cr/sh
Math 230	Elements of Statistics	3 cr/sh

### **Psychology**

Psychology 171	General Psychology	3 cr/sh
----------------	--------------------	---------

Other relevant courses might include general microbiology, immunology, neuroscience, brain and behavior, sociology, and cancer biology.

### **Dental School**

The American Dental Education Association [ADEA](#) is “the voice of dental education”.

You may enter dental school after completing 90 credits of undergraduate course work. However, that is not as common as it used to be. Dental schools are becoming more competitive and most

students that enter have a baccalaureate degree. The required courses vary by school, but are similar to those required for medical school (see above), except few require math. You should investigate the specific requirement of each school you are applying to. For the Marquette Dental School the prerequisite courses (all science courses include labs) are:

English	6 cr/sh
General Chemistry	8 cr/sh
Organic Chemistry	8 cr/sh
Biology or Zoology	8 cr/sh
Physics	8 cr/sh
Electives	52 cr/sh *

\*Sculpture is recommended because of the crafting of teeth etc.

Some schools recommend speech, business, or economics courses. Check early with the specific schools you want to apply to for specific requirements.

In addition, the dental admission tests (DAT) is required. The test, itself, is administered at Sylvan Technology Test Centers in the United States and is computer based. It can be taken almost anytime during the year. You must wait 90 days before any retakes.

Dental Admission Testing Program  
211 East Chicago Ave, Suite 1846  
Chicago, IL 60611  
(312) 440-2689

### [Optometry School](#)

To learn more about Optometry schools, visit the [Association of Schools and Colleges of Optometry](#).

The courses listed under the [medical school section](#) should meet the requirements for most optometry schools. Some schools do not require the second semester of organic chemistry and many require biochemistry, physiology, psychology and statistics or calculus. Some also require microbiology (Biol 376). You should investigate the specific requirements for each school you apply to.

The [OAT exam](#) is computerized, multiple-choice test and examinees are allowed to take the OAT an unlimited number of times but must wait at least 90 days between testing dates. However, only scores from the four most recent attempts and the total number of attempts will be reported.

### [Podiatry Schools](#)

Mathematics is not required and if you follow the typical “pre-med” courses you will likely meet the admission requirements. Check with individual schools. The MCAT or GRE may be required.

### [Veterinary School](#)

To learn more about Veterinary Programs, visit the [Association of American Veterinary Medical Colleges](#). Information and advice on applying to Veterinary Medical Colleges can be found [here](#). Overall, the same courses required for [medical school](#) (see above) are also typically required for veterinary school. Most schools require genetics, microbiology, and biochemistry. Most do not require calculus. Check with individual schools for their specific requirements.

Surprisingly, the VCAT is required only by Missouri, Tennessee and Tuskegee (Alabama). All other schools of veterinary medicine require the GRE, though a small number will accept the MCAT or VCAT instead. If you are going to apply to veterinary school a good strategy is to plan on taking the general GRE but also check the schools to which you intend to apply and see if they have additional or alternate requirements. These might include the GRE biology subject test, GRE writing assessment, or VCAT.

### Pharmacy School

Most pharmacy schools require courses similar to those required for medical school. The science courses should include a lab and be taught at the majors level. They typically are:

General Biology  
Human Anatomy  
Statistics  
General Chemistry  
Organic Chemistry  
Physics  
English  
Behavioral Sciences (sociology or psychology)  
Economics  
Public Speaking

See appendix B for the specific courses required by UW Madison and the University of Minnesota pharmacy schools.

### Physician Assistant Programs

The [American Academy of Physician Assistants](#) provides general information on how to become a PA.

PA programs look for students who have a desire to study, work hard, and to be of service to their community. Most physician assistant programs require applicants to have previous health care experience and a bachelor's degree. The typical applicant has approximately 4 years of health care experience. Commonly nurses, EMTs, and paramedics apply to PA programs. Check with the specific program you are applying to. Many schools offer a master's degree and require the GRE.

Specific courses for the University of Wisconsin-LaCrosse-Gunderson Lutheran Medical Foundation/Mayo School of Health-Related Sciences program include:

Biology: 14 sem hrs of biology in these areas (two of which must be lab courses):

- Anatomy and Physiology: which must be at the 200 (sophomore) level or above. Though vertebrate and mammalian anatomy & physiology are acceptable, human anatomy and physiology is strongly preferred.
- Microbiology: 1 sem of microbiology at the 200 (sophomore) level or above
- Health related upper division biological science: 1 sem of any of the following at the 300 (junior) level or above: Genetics, immunology, vertebrate/mammalian embryology, endocrinology, histology, pathophysiology, neuroscience, parasitology, mycology, or biology of cancer.

Chemistry: A minimum of 11 sem hrs of chemistry including the following courses, at least two of which must include a laboratory:

- General Chemistry: 1 sem of General or Introductory Chemistry



- Organic Chemistry: 1 sem of Organic Chemistry 200 (sophomore) level or above
- Biochemistry: 1 sem of Biochemistry at the 300 (junior) level or above. Molecular or cellular biology at the 300 level or above are acceptable alternatives.

Mathematics: A minimum of two semesters of Mathematics including:

- Pre-calculus/Calculus: 1 sem of College Algebra with Trigonometry or Pre-calculus or Calculus
- Statistics: 1 sem of Statistics

Psychology: A minimum of one semester of general, introductory, developmental or abnormal psychology

Academic Aptitude: A minimum cumulative GPA on all post-high school courses of 3.00 calculated on a 4-point scale. A minimum science (as defined by CASPA) GPA of 3.00. Submission of GRE scores is required.

### [Anesthesiologist Assistants](#)

The American Association of Anesthesiologist Assistants ([AAAA](#)) provides information on application requirements, descriptions of careers, and programs in the U.S.

### [Pathologists' Assistants](#)

The American Association of Pathologists' Assistants ([AAPA](#)) provides information on application requirements, descriptions of careers, and programs in the U.S.

### [Physical Therapy School](#)

The [American Physical Therapy Association](#) provides an overview of educational programs and questions to consider when selecting a program.

Check with specific programs regarding their required admissions exam. The requirements can be found on [PTCAS.org](#). Because they grant a doctoral degree, most programs require the GRE. In addition, schools require 40 or more hours shadowing or working with physical therapists. Pre-requisite courses and clinical hours vary widely so you do need to keep track of the requirements for each of the schools to which you may apply.

Specific [coursework for UW-La Crosse PT](#) program

General Biology (lab required)	4 sh
Human Anatomy/Physiology (300 level labs required)	8 sh
Chemistry (labs required)	8 sh
Physics (labs required)	8 sh
Psychology	3 sh
Statistics	3 to 4 sh
Sociology	3 sh

### [Occupational Therapy School](#)

For an overview of Occupational Therapy, visit [The American Occupational Therapy Association](#). Check with specific programs regarding their required admissions exam. Because they grant a Master's Degree, many programs require the GRE. Most programs also require 40-50 hours of observation, 3-5 letters of recommendation, and a personal statement. Specific requirements can be found at [OTCAS.gov](#). For coursework, [UW-L course requirements](#) are a good representation (and Viterbo students have recently attended this program). Most requirements are similar to these:

Medical Terminology	
General Biology (lab required)	4 sh
Human Anatomy/Physiology (300 level labs required)	8 sh
Chemistry (labs required)	8 sh
Physics (labs required)	8 sh
Abnormal Psychology	3 sh
Developmental or Life Span Psychology	3 sh
General Psychology	3 sh
Statistics	3 to 4 sh
Sociology	3 sh

### **Clinical Laboratory Scientists (CLS) (also known as Medical Laboratory Scientists)**

The American Society for Clinical Laboratory Science ([ASCLS](#)) provides information on application requirements, descriptions of careers, and programs in the U.S.

### **Audiologists**

The Academy of Doctors of Audiology ([ADA](#)) and [American Academy of Audiology](#) provide information on application requirements, descriptions of careers, and programs in the U.S.

### **Genetic Counselor**

The National Society of Genetic Counselors ([NSGC](#)) provides information on application requirements, descriptions of careers, and programs in the U.S.

### **Chiropractic School**

An overview of chiropractic colleges is available from the [Association of Chiropractic Colleges](#).

You may enter chiropractic schools after 90 credits of undergraduate studies, usually 24 hours of science. Many schools also have a minimum number of upper division hours and a minimum GPA requirement, usually 3.0 and above. They do not, however, have an admissions exam as of 2016. There is discussion about requiring one. Check with the schools to find specific course requirements. Most are similar to these:

Biological Science	6 semester hours with associated labs
Chemistry	12 semester hours of chemistry with labs
Physics	6 semester hours of physics with labs
Psychology	3 semester hours
Social Science/Humanities	15 semester hours
Language/Communications	6 semester hours

In addition, chiropractic schools strongly encourage some business courses since you will likely be running your own practice or be a partner in an existing practice.

Viterbo University has a 3+3 articulation agreement with Logan College of Chiropractic and with Palmer College of Chiropractic. This would allow you to enter the workforce a year early in most cases. See appendix A.

### **Academic Record**

Academic success in the professional schools is best indicated by a consistently strong undergraduate grade point average (GPA) reflected with equally strong standardized scores on the entrance exams. Professional schools pay close attention to the course load and the

degree of difficulty of the courses you take each semester. Schools prefer to see you taking a full-load, including two science courses, of 15 to 18 credits each semester, with two exceptions. The first exception is the first semester of college when you are undergoing an adjustment from high school. The second exception is the semester you are preparing for the MCAT or other standardized exam.

### **Realistic Understanding of the Profession**

Once an applicant is deemed eligible for the professional schools, the admissions committees look at how strong the student's motivation is for career in the health professions. The best way to demonstrate a commitment to a health professions career is to demonstrate an on-going interest in the field outside the classroom. By the time you apply to your particular program, you should have spent a significant amount of time volunteering, shadowing a professional, working in a clinic, nursing home, office, or hospital. Check with the pre-health advisor for potential shadow opportunities. You may also consider working with or job shadowing a professional in your hometown during school breaks. You should keep a journal of your experiences, describing your first impressions, examples of what your responsibilities are, and any significant experiences that you have. This information will be valuable as you write essays and interview at your various programs.

### **Commitment to Service**

Another area you will be evaluated in is your demonstrated commitment to service in the community. As a health professional, much of your adult life is devoted to serving others, which requires sacrifice and a strong devotion to one's career. When students commit time to others, they demonstrate this devotion and gain a better understanding about the lives of people from different backgrounds. You can contact the Viterbo service learning coordinator to get ideas for service activities or you can work with your advisor. The campus ministry program at Viterbo would also be a good resource for service-related activities. The schools want to know about how you relate to people and whether caring for the sick is something you are really interested in.

### **Leadership Activities**

Most admissions committees want to see students involved with activities other than academics. They will look to see that you can maintain your grades while demonstrating leadership skills or through being involved with a club, varsity sports, or other organization. You can learn a lot about yourself by experiencing the challenges of overseeing peers and tackling projects. It will provide you with a release from studies and help make you a more well-rounded individual while building important leadership skills.

### **Research Experience**

Some admissions committees look for significant research experiences, others do not put as much emphasis on research. Most of the more prestigious programs want you to have some type of significant research experience (which typically means you have published your results in a peer-reviewed journal or you have presented your results at a professional meeting) beyond what is required for graduation. Those schools that are preparing you to be primary care practitioners may not focus on a research experience.

At Viterbo, you may be required to do a research project as part of your graduation requirements. By choosing to do an extended project, an off-campus internship, or presenting

your work at a national meeting you can demonstrate that you have initiative, determination, and that you are developing your problem solving skills. If you devote a significant amount of time to research, you should know your topic inside and out and be able to discuss it with excitement. Take your research experiences seriously. Present your results at a regional or national meeting. Compete for an off-campus research experience.

## A 4-YEAR PLANNING GUIDE

### THE FRESHMAN YEAR—AWARENESS

What should you do freshman year?

- Study, study, study, study, study, study, study, study, study, study, study, study, study....Do your best academically—a strong grade point average will provide you with more options
- Begin exploring majors and health professions careers; career services can help with this
- Meet with your academic and health professions advisors to plan your academic program
- Investigate and apply for medical/health care related part time jobs and volunteer experiences
- Begin exploring extracurricular, volunteer, and community service activities on campus and in the community
- Get to know your professors and help them get to know you
- Talk to seniors to find out what they did to be successful
- Start a portfolio of experiences that will help you when you write your application
- Freshman year counts!

#### What every pre-health professions freshman should know

The freshman year is a time of transition. You may be away from home for the first time, you have to find new friends, adjust to a new living situation, and being completely responsible for planning your time. The focus of the first semester should be making this transition as smooth as possible. Do not overload yourself. You must average 15 credits per semester to graduate in 4 years. That means if you take only 14 credits the first semester, you will have to make up the credit down the road. Your primary focus for the first year should be on academics. If your course work is going well, and your schedule permits, you may begin to explore campus activities and part-time jobs. Remember, your permanent record begins with your freshman year so it is essential that you begin with a strong, solid start.

### THE SOPHOMORE YEAR—EXPLORATION

What should you do the sophomore year?

- Study, study, study, study, study, study, study, study, study, study, study, study, study.... Keep your grades up! Grades are key to being competitive for health profession programs!
- Commit to one or two extracurricular activities that will lead to leadership, community service activities and other activities that show a commitment to your profession
- Get preparation materials for the appropriate entrance tests and look them over!
- Research programs and schools that you are interested in so that you are familiar with their specific requirements
- Begin informational interviewing to gain realistic perspectives of health professions careers from people in them. Ask your advisor or the pre-health coordinator for tips on informational interviewing.
- Find a summer internship or career enhancing part-time job
- Get to know your professors and help them get to know you
- Talk to seniors to find out what they did to be successful
- Finalize your progress forms and submit it to the pre-health committee for review

#### What every pre-health professions sophomore should know

By your sophomore year, you should be settled into the college routine and understand what is expected from you academically. If you got off to a slightly shaky start, there is still time to improve your GPA. Your courses should be a balance of science courses and liberal studies courses. The pre-health committee will review your progress in the spring of your sophomore year. The committee will make recommendations to help you succeed or identify alternative career paths.

Review: See Appendix C for the form to be submitted to the committee.

## **THE JUNIOR YEAR—EXPERIENCE**

What should you do the junior year?

- Study, study, study, study, study, study, study, study, study, study, study, study, study....
- Take electives that are relevant to your career goals, especially upper level challenging ones. Keep your grades up!
- Consider taking on a leadership role with a campus organization or in another activity
- Continue or expand your involvement with student clubs/organizations and community activities/volunteer programs
- Begin to prepare for the MCAT, DAT, OAT, or other required exam. NOTE: this will take a significant amount of time and you should plan to spend more than a weekend or two before the exam to studying
- Research schools you would likely apply to so you are familiar with their specific requirements
- Develop a backup plan with your advisor if you do not get into your first choice program on the first try
- Learn about ethical issues and health care issues that directly affect your future profession
- **APPLY TO YOUR SCHOOL DURING THE SUMMER BEFORE YOUR SENIOR YEAR** (or as early as possible)

### **What every pre-health professions junior should know**

The junior year is key year in your academic life, as well as one of the busiest. You will be preparing for admissions exams, collecting letters of recommendation, submitting scores and applying to various programs, and taking the final courses that are covered on the standardized exams. In the semester you are preparing for the MCAT or another admissions exam you should consider a little lighter load, perhaps 12 or 13 credits. Your study time should be built into your day. **Apply early.** Many schools fill up fast and many process the applications as they arrive. Don't shoot for a deadline, but be organized and apply as early as you can.

## **THE SENIOR YEAR—CHOICE**

What should you do the senior year?

- Study, study, study, study, study, study, study, study, study, study, study, study, study....
- Consider taking on a leadership role with a campus organization or in another activity if you have not done so
- Continue and/or expand your involvement with student clubs/organizations and community activities/volunteer programs
- Collect your final group of recommendation letters
- Submit all application materials as early as possible. NOTE: This will also take a significant amount of time. Plan for technical difficulties with web sites and allow plenty of time before deadlines to get material submitted

- Practice interviewing skills; career planning can help prepare you.
- Have questions for each place you will interview
- Select your school!
- Discuss "back up plans" with your health professions advisors if you do not get into a health profession program
- Let those that write you letters of reference know what the outcome is

### **What every pre-health professions senior should know**

The senior year is filled with many different pressures. The beginning of the year begins with submitting secondary applications and studying for all your courses. You may have interviews beginning during the first semester as well. You may also have to wait once you submit all your application materials if programs do not start interviews until the spring. You may not be accepted this year. The average age for students entering medical school is 24, suggesting that students are not getting in just out of college. If you are not accepted on the first try, do not give up. There are several things you can do during the senior year to help your subsequent applications. Talk to a health career advisor for your options.

#### *Summary*

There are no short-cuts to getting admitted into the professional schools. It takes work and dedication and you must be competitive in several areas: your overall and science GPAs, scores on the standardized entrance exams, and your application all have to be competitive. With careful planning over your 4 years of college, and with reaching milestones set by the pre-health committee, you are likely to get accepted into a program of interest to you.

### **Entrance Exams**

#### **MCAT**

##### *Overview of the MCAT Exam*

<https://students-residents.aamc.org/applying-medical-school/article/whats-mcat-exam/>

The Medical College Admission Test (MCAT) is a standardized, multiple-choice examination that is a prerequisite to the study of medicine. Medical college admission committees consider MCAT scores as part of their admission decision process. Almost all U.S. medical schools require applicants to submit MCAT scores during the application process. Many schools do not accept MCAT scores if taken more than three years ago.

In April 2015, the AAMC launched a new version of the MCAT exam. Scores are reported in four sections:

1. Biological and Biochemical Foundations of Living Systems
  2. Chemical and Physical Foundations of Biological Systems
  3. Psychological, Social, and Biological Foundations of Behavior
  4. Critical Analysis and Reasoning Skills
1. Biological and Biochemical Foundations of Living Systems  
This section has 59 questions, is allotted 95 minutes, and is designed to:
    - test introductory-level biology, organic chemistry, and inorganic chemistry concepts;

- test biochemistry concepts at the level taught in many colleges and universities in first-semester biochemistry courses;
- test cellular and molecular biology topics at the level taught in many colleges and universities in introductory biology sequences and first-semester biochemistry courses;
- test basic research methods and statistics concepts described by many baccalaureate faculty as important to success in introductory science courses; and
- require you to demonstrate your scientific inquiry and reasoning, research methods, and statistics skills as applied to the natural sciences.

## 2. Chemical and Physical Foundations of Biological Systems

This section has 59 questions, is allotted 95 minutes, and is designed to:

- test introductory-level biology, organic and inorganic chemistry, and physics concepts;
  - test biochemistry concepts at the level taught in many colleges and universities in first-semester biochemistry courses;
  - test molecular biology topics at the level taught in many colleges and universities in introductory biology sequences and first-semester biochemistry courses;
  - test basic research methods and statistics concepts described by many baccalaureate faculty as important to success in introductory science courses; and
  - require you to demonstrate your scientific inquiry and reasoning, research methods, and statistics skills as applied to the natural sciences.
- Chemical and Physical Foundations of Biological Systems

## 3. Psychological, Social, and Biological Foundations of Behavior

This section has 59 questions, is allotted 95 minutes, and is designed to:

- test psychology, sociology, and biology concepts that provide a solid foundation for learning in medical school about the behavioral and sociocultural determinants of health;
- test concepts taught at many colleges and universities in first-semester psychology and sociology courses;
- test biology concepts that relate to mental processes and behavior that are taught at many colleges and universities in introductory biology;
- test basic research methods and statistics concepts described by many baccalaureate faculty as important to success in introductory science courses; and
- require you to demonstrate your scientific inquiry and reasoning, research methods, and statistics skills as applied to the social and behavioral sciences

## 4. Critical Analysis and Reasoning Skills

The Critical Analysis and Reasoning Skills section of the MCAT exam will be similar to many of the verbal reasoning tests you have taken in your academic career. It includes passages and questions that test your ability to comprehend what you read. You may find this section to be unique in several ways, though, because it has been developed specifically to measure the analysis and reasoning skills you will need to be successful in medical school. The Critical Analysis and Reasoning Skills section achieves this goal by asking you to read and think about passages from a wide range of disciplines in the social sciences and humanities, followed by a series of questions that lead you through the process of comprehending, analyzing, and reasoning about the material you have read.

Critical Analysis and Reasoning Skills passages are relatively short, typically between 500 and 600 words, but they are complex, often thought-provoking pieces of writing with sophisticated vocabulary and, at times, intricate writing styles. Everything you need to know to answer test questions is in the passages and the questions themselves. No additional coursework or specific knowledge is required to do well on the Critical



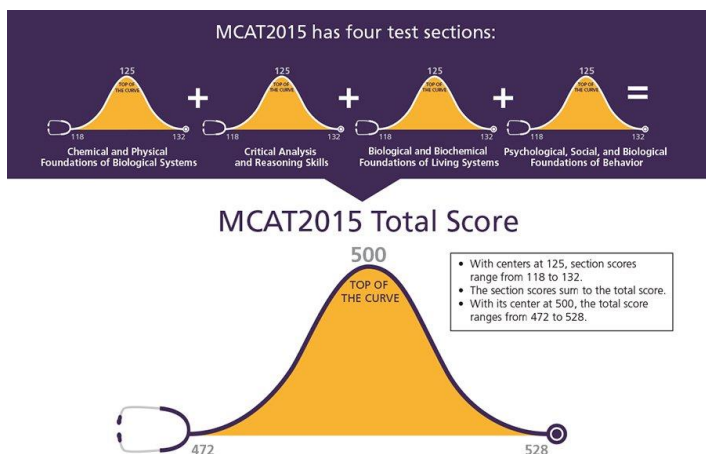
Analysis and Reasoning Skills section, but you, as the test taker, may find yourself needing to read the passages and questions in ways that are different from the reading required in the textbooks you used in most pre-health courses or on tests like the SAT Critical Reading exam. Passages for the Critical Analysis and Reasoning Skills section—even those written in a conversational or opinionated style—are often multifaceted and focus on the relationships between ideas or theories. The questions associated with the passages will require you to assess the content, but you will also need to consider the authors' intentions and tones and the words they used to express their points of view. This section has 53 questions and is designed to

- test your comprehension, analysis, and reasoning skills by asking you to critically analyze information provided in passages;
- include content from ethics, philosophy, studies of diverse cultures, population health, and a wide range of social sciences and humanities disciplines; and
- provide all the information you need to answer questions in the passages and questions themselves.

You will receive five scores from your MCAT exam: one for each of the four sections and one combined total score.

**Section Scores:** Each of the four sections--Biological and Biochemical Foundations of Living Systems; Chemical and Physical Foundations of Biological Systems; Psychological, Social, and Biological Foundations of Behavior; and Critical Analysis and Reasoning Skills--is scored from a low of 118 to a high of 132, with a midpoint of 125. Test takers will receive scores for each of the four sections.

**Total Score:** Scores for the four sections are combined to create a total score. The total score ranges from 472 to 528. The midpoint is 500.



### How is the MCAT scored?

You will receive five scores from your MCAT exam: one for each of the four sections and one combined total score. Your number correct scores on the four multiple-choice sections of the MCAT exam are based on the numbers of questions you answer correctly. Wrong answers are scored exactly the same as unanswered questions and do not affect your score. There is no additional penalty for wrong answers, so even if you are unsure of the correct answer to a question, you should make your best guess.

The number correct score for each section is converted to a scaled score ranging from 118 (lowest) to 132 (highest). For example, if your number correct score on one of the sections is between 35 and 37, your converted score might be 123. Number correct scores ranging from 46 to 48 might have a converted score of 128, and so forth.

For historical scores on the MCAT, visit AAMC link below

<https://students-residents.aamc.org/advisors/article/historical-percentile-ranks-new-exam/>

## PCAT

Most (but not all) colleges and schools of pharmacy require the PCAT for admission to their program. See [this link](#) for more information on the PCAT. [This link](#) contains a list of admission requirements and which schools require the PCAT.

### *Test Content*

The PCAT consists of approximately 192 multiple-choice questions and an essay. Candidates are given 30 minutes for the essay and between 45 and 50 minutes for the other four sections.

The PCAT is divided into five separate sections, or subtests, each of which is timed separately. During the time allowed for each subtest, you will be permitted to work only on that section. You will not be allowed to go back to earlier subtests or on to later ones. As you work on each section, you may find it useful to first answer the questions that are easy for you, skipping over those questions to which you will need to return for further thought.

There are five content areas measured by the PCAT in five separate subtests:

- The Writing subtest presents a prompt or topic, stating a problem that you are asked to address by proposing a solution in an original essay in 30 minutes.
- The Biological Processes section presents items in a set accompanying a short passage or as stand-alone items. This subtest measures knowledge of the principles and concepts of basic biology, including general biology, microbiology, and human anatomy and physiology. There are approximately 48 questions in this 45 minute section.
- The Chemical Processes section presents items in a set accompanying a short passage or as stand-alone items. This subtest measures knowledge of principles and concepts of inorganic and elementary organic chemistry. There are approximately 48 questions in this 45 minute section.
- The Critical Reading subtest measures ability to comprehend, analyze, and evaluate reading passages on science-related topics. There are approximately 48 questions in this 50 minute section.
- The Quantitative Ability subtest consists entirely of stand-alone items, with many of the items presented in a word-problem or problem-solving scenarios. This section measures skills in mathematical processes and the ability to reason through and understand quantitative concepts and relationships, including applications of algebra, geometry, probability and statistics, pre-calculus, and calculus. There are approximately 48 questions in this 50 minute section.

Within five weeks after the date of testing, you will be sent your personal Score Report, and the institutions to which you requested your scores be reported will be sent official score transcripts.

### *Interpreting Your Score Report*

Scores on the Official Score Report are reported as scaled scores and percentile ranks for each of the four multiple-choice subtests and as a Composite score for the combined multiple-choice subtests. All percentile ranks are based on current norms in effect as of July 2016. Writing subtest scores are reported as the candidate's earned score, along with an average score for all candidates taking the exam during the previous 12 months.

There is no passing or failing score for this test. The extent to which test results are used in deciding whether or not a person will be admitted to a college of pharmacy varies from one school to another. Please consult the schools to which you are applying for information about their use of test scores. In general, test results are combined with other information, such as high school and undergraduate records, references, and the results of personal interviews.

## **DAT**

This information is from the ADA web site:

<https://www.ada.org/en/education-careers/dental-admission-test>

Successful participation in the Dental Admission Testing Program requires completion of at least one year of collegiate education, which should include courses in biology, and general and organic chemistry. Advanced level biology and physics are not required. Applicants should note that test scores are developed in relationship to all candidates participating in the examination and that most applicants complete two or more years of college before taking the examination. It is suggested that applicants to dental school participate in the Dental Admission Testing Program well in advance of intended dental school enrollment. It is suggested that applicants participate one year prior to entering dental school.

The examinations are comprised exclusively of multiple choice test items presented in the English language. Each edition of an examination is developed according to the examination outline. There are four examinations included in the Dental Admission Testing Program. As is the case with the MCAT, the DAT is based on the number correct and testers are not penalized for guessing. Scores used in the testing program range from 1 to 30. There are no passing or failing scores; the standard score of 17 typically signifies average performance on a national basis. The entire program requires just over one half day for administration. The examinations included are:

### *Part I - Survey of the Natural Sciences*

#### **Biology:**

- *Cell and Molecular Biology* - origin of life; cell metabolism (including photosynthesis)/ enzymology; cellular processes: thermodynamics; organelle structure and function; mitosis/meiosis
- *Diversity of Life: Biological Organization and Relationship of Major Taxa* (monera, planti, animalia, protista, fungi, etc.) using the five kingdom system
- *Vertebrate Anatomy and Physiology: Structure and Function of Systems* - integumentary, skeletal, muscular, circulatory, immunological, digestive, respiratory, urinary, nervous/senses, endocrine, and reproductive
- *Developmental Biology* - fertilization, descriptive embryology, and developmental mechanisms
- *Genetics* - molecular genetics, human genetics, classical genetics, and chromosomal genetics

- *Evolution, Ecology, and Behavior* - natural selection, population genetics/speciation, cladistics, population and community ecology, ecosystems, and animal behavior (including social behavior)

### **General Chemistry:**

- *Stoichiometry and General Concepts* - (percent composition, empirical formulae, balancing equations, moles and molecular formulas, molar mass, density, and calculations from balanced equations)
- *Gases* - kinetic molecular theory of gases, Dalton's, Boyle's, Charles, and ideal gas laws
- *Liquids and Solids* - intermolecular forces, phase changes, vapor pressure, structures, polarity, and properties
- *Solutions* - polarity, properties (colligative, non-colligative), forces, and concentration calculation
- *Acids and Bases* - pH, strength, Bronsted-Lowry reactions, and calculations
- *Chemical Equilibria* - molecular, acid/base, precipitation, calculations, and Le Chatelier's principle
- *Thermodynamics and Thermochemistry* - laws of thermodynamics, Hess' law, spontaneity, enthalpies and entropies, and heat transfer
- *Chemical Kinetics* - rate laws, activation energy, and half life
- *Oxidation-Reduction Reactions* - balancing equations, determination of oxidation numbers, electrochemical calculations, and electrochemical concepts and terminology
- *Atomic and Molecular Structure* - electron configuration, orbital types, Lewis-Dot diagrams, atomic theory, quantum theory, molecular geometry, bond types, and sub-atomic particles
- *Periodic Properties* - representative elements, transition elements, periodic trends, and descriptive chemistry
- *Nuclear Reactions* - balancing equations, binding energy, decay processes, particles, and terminology
- *Laboratory* - basic techniques, equipment, error analysis, safety, and data analysis.

### **Organic Chemistry:**

- *Mechanisms (Energetics, Structure, and Stability of Intermediates)* - SN1, SN2, elimination, addition, free radical, and substitution mechanisms
- *Chemical and Physical Properties of Molecules and Organic Analysis* - inter and intra molecular forces, separation, introductory infrared spectroscopy, <sup>1</sup>H NMR spectroscopy, <sup>13</sup>C NMR, chemical identification, stability, solubility, and polarity
- *Stereochemistry* - conformational analysis, optical activity, chirality, chiral centers, planes of symmetry, enantiomers, diastereomers, and meso compounds
- *Nomenclature* - IUPAC rules, and functional groups in molecules
- Individual Reactions of the Major Functional Groups and Combinations of Reactions to Synthesize Compounds
- *Acid Base Chemistry* - resonance effects, inductive results, and prediction of products and equilibria
- *Aromatics and Bonding* - concept of aromaticity, resonance, atomic orbitals, molecular orbitals, hybridization, bond angles, and bond lengths.

Angle discrimination, form development cubes, orthographic projections, apertures, and paper folding.

### *Part III - Reading Comprehension*

Ability to read, organize, analyze, and remember new information in dental and basic sciences. Ability to comprehend thoroughly when studying scientific information. Reading materials are typical of materials encountered in the first year of dental school and require no prior knowledge of the topic other than a basic undergraduate preparation in science. The Reading Comprehension Test contains three reading passages.

### *Part IV - Quantitative Reasoning*

#### **Mathematical Problems:**

- *Algebra* - equations and expressions, inequalities, exponential notation, absolute value, ratios and proportions, and graphical analysis
- *Numerical calculations* - fractions and decimals, percentages, approximations and scientific notation
- *Conversions* - temperature, time, weight, and distance
- *Probability and Statistics*
- *Geometry*
- *Trigonometry, and Applied Mathematics (Word) Problems*

#### **OAT**

Review the [Optometry Admission Test \(OAT\)](#) to find out more about the test.

#### **Overview**

The OAT consists of a battery of four tests on the following: Survey of the Natural Sciences, Physics, Reading Comprehension, and Quantitative Reasoning. In the OAT, both the U.S. customary system and the metric system (Imperial System) of units are used.

#### **What is on the test?**

The OAT consists of multiple-choice items distributed across a battery of four tests: the Survey of the Natural Sciences (Biology, General Chemistry, and Organic Chemistry), Reading Comprehension, Physics, and Quantitative Reasoning Tests. The test specifications list the topic areas covered in each of the four tests and are located in the OAT Guide at [www.ada.org/oat](http://www.ada.org/oat); please review for detailed information.

#### **How long does the test take?**

Please refer to the OAT Guide for detailed information on the administration of the test:

<http://www.ada.org/oat>

#### **Optometry Admission Test**

Optional Tutorial	15 minutes
<b>Survey of Natural Sciences</b>	<b>90 minutes</b>
<b>Reading Comprehension Test</b>	<b>60 minutes</b>
Optional scheduled break	30 minutes
<b>Physics Test</b>	<b>50 minutes</b>
<b>Quantitative Reasoning Test</b>	<b>45 minutes</b>
Optional Post-Test Survey	15 minutes
<b>Total Time</b>	<b>5 hours 5 minutes</b>

## **GRE**

The graduate record exam (GRE) is a standardized exam that measures verbal skills, analytical writing, and quantitative skills. The overall testing time for the computer-delivered GRE General Test is about three hours and 45 minutes. There are six sections (two sections in each of Analytical Writing, Verbal Reasoning, and Quantitative Reasoning) with a 10-minute break following the third section. Exam takers may move freely forward and backward throughout each section, mark questions for review, or change answers within a section.

The Verbal Reasoning and Quantitative Reasoning measures are section-level adaptive. This means the computer selects the second operational section of a measure based on your performance on the first section. This means that the exam **NO LONGER** adapts **WITHIN** an individual section. Within each section, all questions contribute equally to the final score. This raw score is converted to a scaled score through a process known as equating. The equating process accounts for minor variations in difficulty among the different test editions as well as the differences in difficulty introduced by the section-level adaptation.

For the writing section, each essay receives a score from a human grader and a computerized program capable of identifying essay features related to writing proficiency. These scores utilize a holistic six-point scale and are compared for similarities, with an additional human grader being used if the grades disagree. The final score is averaged and rounded to the nearest half-point interval from 0-6.

Three scores are reported on the GRE General Test:

- a Verbal Reasoning score reported on a 130–170 score scale, in 1-point increments
- a Quantitative Reasoning score reported on a 130–170 score scale, in 1-point increments
- an Analytical Writing score reported on a 0–6 score scale, in half-point increments

Each GRE test score is reported with a corresponding percentile rank. A percentile rank for a score indicates the percentage of examinees who took that test and received a lower score. Regardless of when the reported scores were earned, the percentile ranks for General Test and Subject Test scores are based on the scores of all examinees who tested within a recent time period.

### **Application Process**

#### **Apply Early**

Most programs operate on a rolling admissions, which means they fill the class as applications come in. The class may fill before the posted deadline.

Many programs have centralized, computer-based application processes. Although they are not difficult, they are time consuming and you have the quirks of technology to contend with at times. You should begin those applications even before you get the scores of your standardized exams back. Also you should be asking for letters of recommendation at this time so that once you complete the computer based application you can have your file be complete very early in the process. Contact your letter writers early—even before you leave for the summer.

Below are some of the websites for the programs that use a central application process.

P.A. programs.: [www.caspaonline.org](http://www.caspaonline.org)  
Medical Schools: [www.aamc.org/students/amcas/start.htm](http://www.aamc.org/students/amcas/start.htm)  
Osteopathic Schools: <https://aacomas.aacom.org/>  
Pharmacy schools: [www.pharmacas.org](http://www.pharmacas.org)  
Veterinary schools: <http://aavmc.org/vmcas/vmcas.htm>  
Dental Schools: <http://aadsas.adea.org/>

## **Commonly Asked Questions**

### **What major should I be?**

The study and practice of any of the health care fields requires an appreciation of the scientific method and an understanding of the modern concepts in biology, chemistry and physics. Therefore, most students major in one of the sciences. As will most universities, there is no “pre-health” major at Viterbo since any major can fulfill this responsibility. Therefore, you should select a major that will best fit your interests. Most professional schools will accept any major as long as you meet the prerequisites for the schools. In fact, having a non-science major may make you stand out from your peers and may help land that interview. However, you should not choose a non-science major just to be unique or to appear to be avoiding the rigors of the science curriculum. Most schools and programs will look at the rigor of the courses taken and whether you took more than one rigorous course each semester regardless of the academic major of the applicant. Schools want to know that you can handle a heavy science load and an academically challenging program. Keep in the back of your mind that you are competing with students who challenge themselves in some form and you should be able to do the same, regardless of your major.

### **How will a W affect my application?**

One or two Ws on a transcript, especially if they occur early or can be explained (extended illness, death in the family) are likely not going to inhibit your application. However, many Ws or having them in the same course is generally a red flag and may show a lack of maturity, motivation, or career choice. The same is true for many D’s on a transcript. Additionally, not being able to take two science courses in one semester by having a W in one and a grade in another may make you appear less competitive.

### **If I have one bad semester, will that prevent me from getting into my professional school?**

No, one semester may not prevent you from having your application considered. A D may be compensated, in part, by repeating the course and earning an A or AB. If you bounce back and excel in subsequent semester, the bad semester can be somewhat overlooked. However, a series of Cs in prerequisite courses would likely be considered a fairly strong indicator of trouble. That may suggest that a student lacks motivation, ability, interests, or have made an improper career choice. Other red flags are an inconsistent pattern, with swings in GPA. Appearing to avoid taking challenging courses alone or together is also a red flag. You should not appear to be attempting to raise your GPA by taking courses that are not academically challenging, nor avoiding taking two challenging courses at the same time. Additionally, an overall high GPA cannot compensate for a relatively low science GPA.

## **Do I need a 4.00 GPA to be accepted to medical school?**

No, but you do want to aim for a 3.5 to a 3.6 GPA. You may be considered with a lower than average GPA, but the other parts of your application will have to be very strong. To be accepted with a GPA significantly below the mean there must be something that makes you stand out as truly SPECIAL. Some health professions programs have lower mean GPAs. You should ask the admissions committee what the average GPA for accepted applicants was the previous year.

Some typical GPAs for students accepted into the various health professions programs are:

M.D.:	3.7 overall/3.5 science
D.O.	3.4 overall/3.3 science
Dental:	3.5 overall/3.3 science
Podiatry:	3.2 overall
D.V.M.	3.6 overall
Chiropractic	3.0 overall

Another source with some previous mean GPAs (updated in 2015) comes from Marquette University: <http://www.marquette.edu/pre-health-advising/documents/HealthProfessionsComparisonChart.pdf>

## **What costs are associated with applying and attending professional schools?**

First, there is the cost of applying to the schools. That can include the fee to take the standardized exams, the fee each school charges for their application, and travel to the test site in some cases.

Secondly, there are the costs associated with interviews including driving distance and/or plane tickets. You may have housing and meal costs as well. Also, since you need to dress professionally there may be costs associated with purchasing an interviewing suit.

Third, there is the cost to attend the school. For medical and dental schools, it is cheaper to attend an in-state school. For example at UW–Madison Medical School, the resident tuition and fees for 2017–2018 was \$32,644. Nonresident tuition and fees has an additional \$10,856 added to the resident tuition and fees <https://finaid.wisc.edu/196.htm>. Costs are similar for the Medical College of Wisconsin. For the University of Minnesota, the costs are even greater for nonresidents, and there is no reciprocity. For the 2016–2017 school year, Minnesota residents paid \$39,608 for tuition and fees for Fall/Spring and Summer, whereas nonresidents paid \$54,533 <https://www.med.umn.edu/md-students/financial-aid/costs-budgeting/twin-cities-student-budget>. The reason in-state tuition is cheaper is that state schools receive some money from the state to help offset the cost of education for future dentists and physicians, hoping they will stay in the state when they graduate.

Finally, there is the cost of daily living expenses. You should plan to have about \$1200 to \$1500 per month for those expenses. You will likely come out of medical or dental school with an average debt of \$180,000 or so depending on the scholarships you may receive.

The link below provides an opportunity to receive a free guide for financially preparing for health professional schools: <http://info.mghihp.edu/download/financialaid>



### **How will I know if I am competitive for specific medical schools?**

The AAMC publishes a book “Medical School Admission Requirements (MSAR) United States and Canada” each year. That book lists all the medical school, their prerequisite courses, the average statistics for students accepted into their medical school and their MCAT scores, and the costs for each school for both residents and not residents. Go to [www.aamc.org/students](http://www.aamc.org/students) and look up programs of interest on line. You can begin to check out schools during your practice MCAT exams. Once you get your scores, you can decide if you will likely be competitive based upon the information from the prior year.

### **What about MD/PhD programs?**

If you are interested in the M.D./Ph.D. program, then significant research experiences are a must. You should do more than what we require as part of your graduation requirements. Work off campus at an internship in a research laboratory. Demonstrate you have the independence to work on graduate level projects. These programs are extremely competitive and only a few students are selected each year. However, the major advantage is that you are often paid a small stipend during your Ph.D. training and the tuition for your M.D. years are covered if you complete the obligations of the program. This allows you to graduate with much less debt.

If you are selected, you will take the first 2-years of the medical school curriculum, then do research for 3 to 5 years to complete the PhD requirements. After that, you return to the medical school and finish the final 2-years of the medical school curriculum.

If you are interested in earning both an MD and a PhD, but don't want to compete for the MD/PhD programs, you have some other options. This will require some additional advice.

### **What should I know about letters of recommendation?**

First, you should ask people to write your letters of recommendation early in the process. Ask people who know you well. Therefore, you will want to get to know your professors and help them get to know you. Second, give the letter writer as much information as you can. A summary of your leadership activities, your volunteer activities, your courses, and other characteristics evaluated in applications are very useful for letter writers. Perhaps include a resume or your personal statement essays. Third, give them the addresses and deadlines. Most schools prefer to have the letters submitted on school letterhead or online.

### **What can I do to help the faculty get to know me?**

You need to make an effort to meet your faculty, especially in larger courses. Make a point to introduce yourself. You should also plan to make a good impression. For example, make sure you come to class on time, stay alert, and ask questions. Also, seek out help when you need it. Faculty at Viterbo want you to succeed and will work with you when you need extra help with problem solving, homework, or concept review. Take advantage of it.

### **How important is it to volunteer and how much time should I commit?**

All health professions are service professions. Thus, it should not be surprising that professional schools expect applicants to have found ways to be of service to others. There are many opportunities available on campus, in La Crosse and in your hometown to put yourself in the role of a helper. This may include tutoring disadvantaged youth, volunteering at nursing homes, day care centers, camps for the physically challenged, or in programs for the homeless or

hungry. You should be genuinely motivated to be involved in a service effort and you should be able to articulate what the opportunity meant to you. However, keep in mind that any extracurricular activities in which you engage must be balanced with your academic demands. Do not overextend yourself, particularly in your freshman year. Give yourself time to adjust to the demands of college.

### **How do schools view employment, and playing sports or other extracurricular activities?**

It can demonstrate two important qualities: it can demonstrate motivation and it can show you are serious about the things you choose to do (you can commit to them). One thing to be wary of is taking on too much. Most pre-professional programs do not want to see you involved with everything and not contribute much to any of them. Focus on one or two activities and focus on achieving something. Failures may also be a sort of accomplishment if you learn from them. Turn the negative into a positive by talking or writing about what you learned and how you would do things differently in the future.

Many times students cannot avoid having to work while attending college. You should know, however, that you *need to demonstrate that you can do well in at least two semesters of solid 15 to 17 hours of credit, including 2 or 3 hard sciences*. Otherwise, the admission committees will not be sure that you can handle the 23 to 36 hours of science courses in the first year of professional school. Naturally, you should point out your self-supporting activities on your application. If an applicant is working part/full time while attending college, admission committees may consider this *if it is brought to their attention*. The amount of employment could account for a **slightly** lower GPA and/or lack of extracurricular activities. However, it is unlikely to compensate for a weak GPA. In addition, work experience can offer evidence of your personal qualities - your ability to work cooperatively with others, handle responsibility, etc.

Similarly, playing sports can demonstrate leadership and teamwork skills, but you should still be able to handle 15 to 17 credits, including hard science and math courses.

### **When should I take the MCAT?**

The MCAT is typically taken in the junior year. However if you take it later in the year (August or after) it may delay your application and you may not be considered for admittance for another full year. Most schools operate on a rolling admissions basis, which means they accept qualified applicants as they come in, so it is to your advantage to apply early. Even though there is a deadline for applications, the class may be filled before the deadline is reached. Once the class is full, you may still be considered for the wait list or you may not be considered at all.

### **What is on the MCAT?**

The MCAT is broken down into four sections. These sections include: *Biological and Biochemical Foundations of Living Systems; Chemical and Physical Foundations of Biological Systems, Psychological; Social, and Biological Foundations of Behavior, and Critical Analysis and Reasoning Skills*. To explore the various concepts and skills relating to the four sections mentioned above visit <https://students-residents.aamc.org/applying-medical-school/article/whats-mcat-exam/>

### **Should I take a prep class for the MCAT?**

There are several factors to consider before making this decision. One is cost. Many of the preparation programs are expensive. Some students find them helpful, others do not. Because

it is like taking a college course, they somewhat force you to set up a study time to accomplish specific objectives. If you are motivated and have a study group you may accomplish the same thing. The classes offer in-class review of the material and practice MCAT-type exam questions. Even if you take a prep course, you must still put in time and effort reviewing the material. Think of the MCAT as a final exam in the basic sciences and plan to put significant effort into studying for it. Remember, everyone taking the exam will also have taken the same basic science courses and you are competing with them. Therefore, you have to set yourself above the average and that comes with hard work and careful studying.

### **How should I prepare for the MCAT?**

During the semester you are planning to take the MCAT (typically the spring of your junior year), plan to take a lighter course load. Take the time that would normally be used for a course to study for the MCAT. There are several good review books available that can help narrow the topics you need to review. For example, the Betz guide is an excellent resource for MCAT review. It may not be as good for other pre-health programs. You can find a syllabus in the MCAT student manual that may also be useful in helping to plan review material.

The MCAT review books also contain practice exams with questions similar to those found on the MCAT. They can be a good predictor of areas you need to study more and areas that you have studied well. Take some practice sections and as the MCAT nears, plan to take an entire exam with time limits for each section to mimic conditions of the MCAT.

You can purchase and print online practice products written by the test developers at the AAMC. These products include practice exam questions, exam flashcards, and full-length practice exams. You can browse these testing aids at <https://students-residents.aamc.org/applying-medical-school/article/online-practice-mcat-exam/>

### **How is the MCAT scored?**

There are four main sections of the MCAT: *Biological and Biochemical Foundations of Living Systems*; *Chemical and Physical Foundations of Biological Systems*, *Psychological, Social, and Biological Foundations of Behavior*, and *Critical Analysis and Reasoning Skills*. Each of the four sections is scored from a low of 118 to a high of 132, with a midpoint of 125. The scores from the four main sections are combined to create a total score for the MCAT. The total score ranges from a low of 472 to a high of 528, with a midpoint of 500.

### **If I don't do well, should I retake the MCAT?**

Yes, in some instances. If you do poorly (estimated 490 or less) consider taking the MCAT again. 500 seems to be a potential starting point for your application but these do vary from school to school. Some schools will look at improvement, but there is no guarantee that you will score higher the second time. Some schools will take the highest score, regardless of the attempt. Consider contacting the schools admissions committee to find out if your scores are competitive. If so, there may be no reason to retake the MCAT. You are allowed to test up to three times in a testing year, up to four times over two consecutive testing years, and up to seven times total in a lifetime (updated 4/19/17).

### **If I don't take the MCAT until August, should I wait to apply to medical schools until I receive my scores?**

No, still send in your application. This will allow the schools to create a file for you and they can process everything once your scores are in. If you wait, you run the risk of having the class fill before your application is processed.

### **What is the early admission program?**

If you strongly believe that you are a competitive applicant and if you are certain of the school you wish to attend, you can apply for early decision. However, there are risks to this option. The advantage is that you apply to your first choice medical school in the summer and be considered for admission before the majority of applicants are evaluated. You can apply to only one school for early admission and if accepted, you must attend that school. If you are not accepted, your application is released by AMCAS for consideration by other medical schools.

The risk to this is that your application is not released until there is a decision by your first choice school. It can happen as early as the summer or as late as the fall. That may put you at a disadvantage for consideration at other medical schools.

There is a similar program for U of Minnesota pharmacy school. You must have a 3.6 GPA to be considered and the PCAT must be done before the application deadline. There are similar programs for many physical therapy programs and many other health profession programs.

### **What do admissions committees expect you to gain from a "clinical experience"?**

They expect that you understand what it takes to care for others. They want you to experience the realities of working with sick people so you know for yourself what the next 3 to 8 years of school and residency will be like. They also want to know what you have learned about other people, especially those in need, and about yourself.

### **What is the GRE and what programs require it?**

The graduate record exam (GRE) is a standardized exam that measures verbal skills, analytical writing, and quantitative skills. The computerized General Test is given year-round in the U.S., Canada, and many other countries. See above in the section on testing for more information and also the following link for information on the exam:

[https://www.ets.org/gre/revised\\_general/about/content/](https://www.ets.org/gre/revised_general/about/content/).

Programs that require the GRE are often those that grant a doctorate or master's degree. For example, some DPT programs may require the GRE because they grant a Doctorate of Physical Therapy, also some PA programs and all genetic counseling programs. Check with the school to which you are applying for the specific entrance exam they require.

### **What do schools look for in a personal essay on an application?**

The admissions committee wants to see your personality and your values shine through in that essay. They may use it to help determine who gets an interview. Some people use it to explain why they have chosen a career in medicine, others describe a situation that was difficult for them and how they overcame it. Usually describing an experience or making it more personal rather than more general helps you **stand out** from other applicants. It should demonstrate

maturity, good judgment, empathy and concern for others, excellent communication skills, motivation, persistence, and an orientation to the profession. It should be a reflection of you and not what you think the committee wants to hear.

You should have someone else proofread it to be certain it is free of grammatical errors and typos. The goal is for the essay to help the committee recognize how you would be a fit in their program, be certain that it does not serve to undermine your application with poor writing.

Here are some common prompts from the essay section for various applications as of 2017:

**AMCAS:** "Use the space provided to explain why you want to go to medical school."

**AACOMAS:** "In the space provided write a brief statement expressing your motivation or desire to become a DO."

**VMCAS:** "Discuss briefly the development of your interest in veterinary medicine. Discuss those activities and unique experiences that have contributed to your preparation for a professional program. Discuss your understanding of the veterinary medical profession, and discuss your career goals and objectives."

**Dental:** "Your Personal Statement should address why you desire to pursue a dental education and how a dental degree contributes to your personal and professional goals."

**CASPA:** In the space provided write a brief statement expressing your motivation or desire to become a physician assistant.

**PharmCAS:** "Your Personal Essay should address why you selected pharmacy as a career and how the Doctor of Pharmacy degree relates to your immediate and long-term professional goals. Describe how your personal, educational, and professional background will help you achieve your goals. The personal essay is an important part of your application for admission and provides you with an opportunity for you to clearly and effectively express your ideas."

**PTCAS Essay Question for 2017-2018:** "What is professionalism in the context of being a student in a DPT degree program?"

See this website for other tips: <https://www.studentdoctor.net/essays/>

### **How should I prepare for my interview?**

Do not overlook the importance of the interview. Often times, it is what cements an offer to enter a program. Therefore, you should spend some time preparing before the interview. Career Planning and Placement can help with mock interviews. You should also be aware the interviewers are looking for maturity in how you present yourself.

There are several good tips for interviewing at various medical, dental, pharmacy, and osteopathic schools on [www.studentdoctor.net](http://www.studentdoctor.net).

Be prepared for some standard interview questions as well as some "behavioral interviewing" questions that ask you to describe examples of or specific situations in your life or how you would respond to a particular scenario.

- Make sure you can answer questions about your motivation for choosing your career path. The committee will want to see that you have given a good deal of thought to this decision. They want to be certain that you are entering the profession with a good understanding of yourself and why this particular career is for you. Do not give a general answer such as "because I like to help people". Many professions can fall under such general answers. You should be able to clearly articulate why you have chosen a specific career path. Typical questions that may be asked include:

Why do you want to become a doctor, physician assistant, physical therapist etc?  
When did you decided to enter the health care field?  
Who had the greatest influence on you in making the decision?  
If you are not accepted this year, what plans do you have?

- Understand how significant events helped shape your life. Most committees want to get to know you on a more personal level during the interview. They are interested in your upbringing, your family, important events in your life, and what shaped you as a young adult. Often, they want to know about your hobbies, what you enjoy doing in your free time, what issues you think are important on a global scale. Typical questions you may be asked include:

Tell me about yourself.  
How are you similar or different from your parents?  
What do you do in your free time?  
What do you do for fun?  
How would your friends describe you?  
How have you changed since you started college?  
Describe your biggest strength and weakness.  
What is your favorite movie, book, play etc?

- Be able to describe your experiences in the health field you have chosen. This is a chance for you to demonstrate your understanding of the profession and your knowledge of the ups and downs of the profession. The admissions committee will also likely look for direct experience in dealing with sick people. To prepare, look back at your volunteer journal and see if there is a specific example or two you can use to illustrate your knowledge of the field. In addition to your understanding of the field, the committee may be looking for a level of maturity in your answers. Some commonly asked questions are:

How have you gained insight into the profession?  
What is the most positive experience you have had so far in regard to the profession?  
What was the most difficult experience and what did you learn from it (what might you do differently)?  
Have you read any books on the medical field?  
Is there a particular area of medicine that you are more interested in?  
Where would you want to practice? (If you say your hometown, which might be a small town, be prepared to answer how you might handle giving a physical to your 3rd grade teacher.)

- Be able to describe how you have demonstrated responsibility and commitment to this point.

The professional schools will be a challenge unlike any you have likely faced to this point in your life. The admissions committees want to be certain that you can handle the challenge. One way is to demonstrate that you maintain your commitments in the face of difficulties. Another way is to demonstrate that you can overcome difficult situations. Some questions relating to these ideas are:

What was your most difficult course in college? Why?  
What is your biggest accomplishment and why are you proud of it?  
Give me an example of a difficult situation you faced and how you handled it.  
What do you do to alleviate stress?

Outside of school, give an example of something you committed to and how you followed through.

Describe a time when you helped someone that really needed your help.

- Know a great deal about the school itself.

It is important that you know as much as possible about the program and school to which you are applying. Admissions committees often ask questions to see if you are familiar with the mission of the program or school. They want to understand why you have chosen their program over others so you should be familiar with the uniqueness of the school. You will likely be asked if you have any questions for the interviewers and it is a good idea to have a few in mind that are specific to their program (see below for examples). Some typical questions they might ask you are:

Why do you want to come to this school?

Do you think you can live in this state (if applying to something very different than your home state)

What do you think you will gain from our curriculum?

How does our mission fit with your career goals?

### **What are some questions I can ask at my interview?**

- Are there any special programs for which this medical (chiropractic, physical therapy etc) school is noted?
- What can I expect in the pre-clinical and clinical years? Are there any innovations in the curriculum during these years that sets you apart from other schools?
- Has this medical (dental, chiropractic etc) school or any of its clinical departments ever been on probation or had its accreditation revoked?
- How are clinical evaluations performed? How is academic progress evaluated?
- What kind of academic, personal, and financial support is available to students? Do these services extend to spouses and children?
- How diverse is the student body?
- What types of extracurricular activities and facilities are available on this campus?
- What type of clinical sites are available?
- What medical school committees have student representation?
- Are students involved with community service? Is it required?
- Does this school provide guidance on debt management to students or alums?
- Where did recent graduates place in residency programs?

Remember, don't ask questions that may imply that you know nothing about the program that you are applying for.

### **What should I wear to an interview?**

You should look conservatively professional. Males and females should wear suits; blue, black, or grey are safe options. Males should not wear white athletic type socks with their suit. You can add a bit of variance with accessories. A colorful tie or blouse can be used to make you a bit different from your peer group. Tattoos should be covered if they could be offensive. Piercings should also be removed if they could offend someone. You do not want to give the interview committee a reason to reject you. We have had students rejected from programs because of dress. If in doubt, be conservative. In general professional school interviewees are

dressed very boringly, and this is the tradition that some people on the admissions committee will be expecting you to comply with.

### **What are some reasons I might not be accepted?**

Most shortcomings fall into one of three categories: academic, experiential, or personal. Find out which one you have and work to correct it while maintaining the others. For example, if your academics are weak, take advanced courses. If it is the scores on your entrance exams, retake those. Do not make excuses for poor grades and say things like “I am not a good test taker.” You could have well over 300 exams in the course of a 4-year program and committees do not want to hear you do not think you are a good test taker, particularly since in nearly all health professions, taking exams (certification, boards, etc.) will become a major part of your life. If you are deficient in experience, find out how you can correct that. If it is something personal (perhaps your interview showed a lack of maturity), find out exactly what needs to be updated and do that. Most admissions offices want to work with you and will help you find out where your application was weak, so do not be afraid to call and ask. If they give you specific areas, make sure you address them, even if you do not agree with their assessment.

### **What should I do if I am not accepted?**

Most admissions committees are willing to work with applicants. Call and ask them what was the main area or areas of weakness in your application. If they give you suggestions be sure to take them. Resubmitting an application without trying to make up the perceived deficiency by taking the suggestions will undoubtedly get you rejected again. Most committees will pay attention primarily to how a reapplying student’s application has CHANGED from the last time they applied. The average age for acceptance into medical and dental schools is increasing so it is not uncommon to not be accepted just out of college. Working with the committees shows a dedication to the profession and a strong commitment on your part. Second and third applications are very competitive if you are trying to improve, but they MUST show improvement to be considered.

One good way to improve your GPA and/or prove to admissions committees that you can be successful in a professional school curriculum is to take advanced courses prior to reapplying. However, it is important to take demanding courses that pertain to your degree, and not just simple “public health” courses that are not contained within a rigorous program. The best courses are those that are actually offered by medical schools. For example, a graduate level medical biochemistry course offered by a medical program is much preferred to an undergraduate level course.

### **What does it mean to be on hold or on a waiting list?**

Once a class is full, a waiting list is started for students who meet qualifications. Schools want to have enough qualified students to fill a class. Since some accepted students will choose to go elsewhere, there will be openings. Admissions committees use students on the wait list to make sure the class is full.

Being on-hold means the admissions committee could not reach a definite decision. Find out if you are on hold because of some deficiency and update your file as information comes in. Make sure you contact the admissions committees in writing so that your information is placed in the file for the entire committee to review.



## References for codes of professional conduct/ethics

These are codes of professional conduct/ethics for AMA, ADA, AOA, etc., which may be useful when thinking about interview questions. The Core Competencies for Interprofessional Collaborative Practice (lower right) may be especially helpful for the current healthcare environment, where professionals work in interdisciplinary teams.

	<i>For entering professional students</i>	<i>For graduates / practicing professionals</i>
<b>Medicine</b>	<a href="#">AAMC Core Competencies</a>	<a href="#">Principles of Medical Ethics</a>
<b>Dentistry</b>		<a href="#">ADA Code of Ethics and Professional Conduct</a>
<b>Optometry</b>	<a href="#">Functional Guidelines for Didactic and Clinical Optometric Education</a>	<a href="#">AOA Code of Ethics</a>
<b>Physical Therapy</b>	<a href="#">Values to be evaluated in letters of recommendation</a> (p.35)	<a href="#">APTA Professionalism Core Values</a> <a href="#">Code of Ethics for the Physical Therapist</a> <a href="#">Guide for Professional Conduct</a>
<b>Interprofessional</b>		<a href="#">Core Competencies for Interprofessional Collaborative Practice</a> (pp. 19, 21, 23, 25)

Authors: Michael Alfieri and Chris Mayne

Acknowledgements:

Previous versions of the handbook were written by Kim Fredricks. Special thanks to Michaela Sandquist, Pamela Burgess, Chad Gonczy, and Nicholas Wall for input from the student perspective. Thanks also to the members of the natural science division for their input.

## References

Gleason Ann, Paul J. McLoughlin, II. 2004. The OHLPA Health Professions Handbook is for students interested in post-baccalaureate health professions. University of Florida. Gainesville, FL 32611

Greenlead, RK. Servant as a leader. Westfield, Indiana: Robert K. Greenleaf Center, 1982.

Moller, Meridith T. (ed) Medical School Admission Requirements United States and Canada, 2004–2005. Association of American Medical Colleges, Washington, D.C.

Smith, Kathleen and Carolyn Fontana. 1996. Premed Handbook, Florida State University Medical School.

The University of Chicago Health Professions Handbook, 2001–2002, The Office of the Dean of Students in the College. 1116 E. 59th Street, Chicago IL 60637.

US Department of Labor: <http://www.bls.gov/oco/oco1002.htm>

## Appendix A

The Viterbo University [School of Natural Sciences, Mathematics, and Engineering](#) offers a variety of [pre-health articulation agreements](#). These agreements provide students with opportunities to pursue careers in chiropractic, podiatry, pharmacy, dentistry and medicine. Depending upon the program, students may be able to obtain guaranteed acceptance and early entrance based on their undergraduate academic portfolio. These opportunities include a variety of 3+ programs where students can matriculate after completing three years of undergraduate studies at Viterbo University. Finally, we can tailor specific articulation agreements with a variety of professional programs allowing Viterbo University students to earn their bachelor's degree while completing their first year of professional school. Below is a list of current official articulation agreement programs. For additional information regarding these agreements please contact Dr. Michael Alfieri ([msalfieri@viterbo.edu](mailto:msalfieri@viterbo.edu), 608-796-3465).

### Logan/Palmer Articulation Agreement

General Education Requirements:	41 sh
English Composition	6 sh
Religious Studies	6 sh
Philosophy	3 sh
History	3 sh
Fine Arts	4 sh
Literature	3 sh
Social Science (Psychology)	3 sh
Mission Seminars	12 sh
Major:	58 sh
BIOL 160 General Biology I	4 sh
BIOL 161 General Biology II	4 sh
BIOL 250 Molecular & Cellular basis of life	4 sh
BIOL 251 Ecology/Evolution	4 sh
BIOL 370 Biochemistry	4 sh
BIOL 397 Intro to Research	3 sh
BIOL 430 Genetics	4 sh
BIOL 498 Directed Research	2 sh
BIOL 499 Senior Seminar	1 sh
Strongly Suggested:	
BIOL 347 Physiology	4 sh
CHEM 120 General Chemistry I	4 sh
CHEM 121 General Chemistry II	4 sh
CHEM 240 Organic Chemistry I	4 sh
CHEM 340 Organic Chemistry II	4 sh
PHYS 250 General Physics I	4 sh
PHYS 251 General Physics II	4 sh
MATH 230 Elements of Statistics	4 sh
Transfer Credits:	34 sh
Electives taken at LCC in the Basic Sciences.	
Total Degree Requirements:	133 sh

**LECOM articulation agreements:**

Lake Erie College of Osteopathic Medicine

- [LECOM 3+ Early Acceptance-College of Osteopathic Medicine Agreement 2018](#)
- [LECOM 3+ Early Acceptance-School of Pharmacy Agreement 2018](#)
- [LECOM 4+ Early Acceptance-College of Osteopathic Medicine Agreement 2018](#)
- [LECOM 4+ Early Acceptance-School of Pharmacy Agreement 2018](#)
- [LECOM 4+ Early Acceptance-School of Dental Medicine Agreement 2018](#)

**MCW articulation agreement**

Medical College of Wisconsin

- [Pharmacy School](#)

**ENTRY-LEVEL PHARM.D. COURSE REQUIREMENTS FOR ADMISSION\***

*DESIGNATED COURSES AT VITERBO UNIVERSITY*

*Rev. 10/15/01*

**Biology:** Biology 160-161 (Biological Concepts I-II). **Human anatomy, human physiology, and microbiology do not count toward this requirement.**

**Chemistry:** Chemistry 120-121 (General Chemistry I-II) **AND** 240-340 (Organic Chemistry I-II)

**Math:** Math 220-221 (Calculus I-II)

**Physics:** Physics 250-251 (General Physics - General Physics)

**Communication (A. or B., as appropriate):**

**A. For students who began or begin their post-high school college education IN OR AFTER SUMMER 1996:**

English 104 (Composition and Literature), or a score of at least 4 on the AP English: Language & Composition exam, or a score of at least 4 on the AP English: Literature & Composition exam

**B. For students who began their post-high school college education PRIOR TO SUMMER 1996 (either A., above, or the following):**

English 103 (Composition and the Elements of Argument) or 104 (Composition and Literature), or literature read in English, or an appropriate score on an AP English exam, **AND** Theatre Arts 150 (Fundamentals of Speech)

**Economics:** Economics 102 (Microeconomics)

**Social Science:** Sociology 125 (Human Society) or 330 (Cultural Anthropology) [Sociology 330 counts also as ethnic studies]

**Behavioral Science:** Psychology 171 (General Psychology), or Psychology/Sociology 250 (Social Psychology)

**Ethnic Studies:** 3 credits (may count also as social science [above], or history or humanities [below], depending upon the course selected)

\* **Pre-Pharm.D. students** may wish to include in their preparatory course work, if there is time/space, some of the non-professional curriculum **graduation** requirements: 2-3 credits of any kind of history, 6 credits of humanities electives, and sufficient free-choice electives to result in a total of 70 non-professional curriculum credits. Non-professional curriculum **graduation** requirements that are not completed prior to enrollment in the School of Pharmacy may be completed at any time prior to graduation (probably during the summers), and at almost any college or university, with approval.

**NOTE: Credit by exam will be granted only in accordance with UW-Madison policies.** If students have been granted credit by any college or university for College Board Advanced Placement (AP) exams, College Level Examination Program (CLEP) exams, or International Baccalaureate (113) exams, it is imperative that they be aware of the UW-Madison credit policies. This applies also to retroactive foreign language credits. Students should not assume that the above types of credits that may have been granted by other colleges or universities will be accepted by UW-Madison.

**NOTE: Entry-level Pharm.D. applicants** must take the Pharmacy College Admission Test (PCAT). In addition, **international students** (including U. S. permanent residents) whose native language is not English must take the Test of English as a Foreign Language (TOEFL) and the Test of Spoken English (TSE); scores of at least 600 on the paper-based TOEFL or 250 on the computer-based TOEFL, and 50 on the TSE, are required for consideration for admission.

**University of Minnesota College of Pharmacy**

**GUIDE OF APPROVED PREPHARMACY COURSES:**

**Viterbo University**

[https://www.pharmacy.umn.edu/degrees-programs/doctor-](https://www.pharmacy.umn.edu/degrees-programs/doctor-pharmacy/admissions/prerequisites)

[pharmacy/admissions/prerequisites](https://www.pharmacy.umn.edu/degrees-programs/doctor-pharmacy/admissions/prerequisites)

<b>U of MN College of Pharmacy Prerequisites</b>	<b>Semester</b>	<b>Notes / other acceptable courses</b>
<p><b>Biology</b>            General Biology (1 course with lab)            Microbiology (1 course with lab)            Human Anatomy (1 course)            Human Physiology (1 course)  <i>If anatomy is combined with physiology, it must be a minimum of 5 semester credits.</i>            Advanced Biology (1 course)</p>	BIOL 160 BIOL 296 BIOL 464	other acceptable sequences: Alternative: BIOL 104 & 114, If anatomy is combined with physiology, the entire anatomy/physiology sequence must be completed.
<p><b>Mathematics</b>            Calculus I (1 course)            Statistics (1 course)</p>	MATH 220 MATH 230	other acceptable: MATH 130
<p><b>Chemistry</b>            General Chemistry (2 courses, 1 lab)            Organic Chemistry (2 courses, 1 lab)</p>	CHEM 120 CHEM 121  CHEM 240 CHEM 340	other acceptable sequences:
<p><b>Physics</b>            General Physics (calculus-based: 1 course or if algebra-based: 2 courses)</p>	PHYS 250/270 PHYS 251/271	other acceptable sequences:
<p><b>Social &amp; Behavioral Sciences</b>            2 courses or US bachelor's degree</p>	See note	Courses dealing with human behavior in society (psychology or sociology).
<p><b>English Composition, advanced</b>            1 course or US bachelor's degree</p>	ENGL 103 ENGL 104	Students who have been exempted from the freshman English requirement may complete a higher level composition course.
<p><b>Public Speaking or Interpersonal Communication</b>            1 course or US bachelor's degree</p>	ECON 102	Other acceptable course: ECON 101
	COMM 150	

**Appendix C**  
**Sophomore Self Evaluation Forms**

Sophomore Pre-Health Self Evaluation

Please rate yourself on a scale of 1 to 5. This information will be kept confidential by the committee

- 1 = needs considerable improvement
- 2 = needs some improvement
- 3 = OK
- 4 = very good shape
- 5 = outstanding

Career Goal \_\_\_\_\_

Overall GPA	1	2	3	4	5
Math/Science GPA	1	2	3	4	5
Health Care Experiences	1	2	3	4	5
Interviewing Skills					
Proper handshake	1	2	3	4	5
Appropriate Dress	1	2	3	4	5
Professional Behavior	1	2	3	4	5
Letters of evaluation/recommendation					
I have people I can ask	1	2	3	4	5
I have made good impressions	1	2	3	4	5
I have helped them get to know me	1	2	3	4	5
Information gathering about my career	1	2	3	4	5
Standardized Exam Preparation	1	2	3	4	5
Extra-curricular Activities					
I am involved with activities	1	2	3	4	5
I have taken a leadership role	1	2	3	4	5
I have a back-up plan	1	2	3	4	5
I have good writing skills	1	2	3	4	5
I have good oral communication skills	1	2	3	4	5
I can demonstrate good teamwork skills	1	2	3	4	5
I have demonstrated a commitment to service	1	2	3	4	5
I relate well to my peers and others	1	2	3	4	5
I can handle stressful situations	1	2	3	4	5
I would rate myself as mature	1	2	3	4	5
My professors would rate me as mature	1	2	3	4	5
I have a good credit rating	1	2	3	4	5
I have criminal activity in my background	no _____			yes _____	

## Sophomore Pre-Health Action Plan

Name \_\_\_\_\_

My Intended Career  
\_\_\_\_\_

Academic Advisor  
\_\_\_\_\_

Skill	Action
GPA Math/Science  All other classes	
Involvement with Health Care	
Interviewing Skills	
Letters of eval/recommendation	
Information Gathering	
Standardized Test Prep	
Extra Curricular Activities	
Back-up Plan	

A copy of this plan will be sent to your academic advisor. The chair of the pre-health advising committee will keep a copy. The original will be returned to you.