

Pre-Medical Advising - Bridgewater College
Version 2.0, Spring 2006

While many Bridgewater students (and prospective students) are incredibly motivated to discover for themselves the requirements for various medical programs after graduation, many students just aren't quite sure what they might want to do next. Advising students who are bouncing back and forth between medical career options, and even between majors can be an enormous time and energy drain. This document is intended as a guide to admissions requirements to a number of medical programs for Bridgewater students and their advisors.

As a guide, this document can help students arrange their schedules so they are prepared for early admission to 3-2 programs, find the necessary pre-requisites for different programs, etc. However, while most American Medical Association certified MD/DO programs have nearly identical admissions prerequisites, NO OTHER PROGRAM has such a rigid set of prerequisites. Therefore, when applying to vet, dental, nursing, PT and PA programs, for example, the student MUST spend time looking at individual programs at particular institutions to find the EXACT set of requirements necessary to gain admission. To avoid frustration to both the student and advisor, asking the student to "go to the web" and search for admission requirements for each program the student would like to apply for after graduation is a reasonable expectation. With the admission information, it can be a very pleasant conversation with the Bridgewater catalog to match up off-campus prerequisites to our on-campus offerings.

Another note to advising students seeking further medical training after graduation is the use of service learning to further their career goals. For example, medical schools (MD/DO programs) desire a "complete package" from a student for admission. What is a complete package? It is a combination of three items: high GPA, high MCAT score, and medical experience. Of course students will ask, how can I get medical experience without a degree? Very simple, take EMT courses, volunteer for the rescue squad and earn your service learning hours. Or if emergency medicine isn't to the student's taste, volunteer at the Free Clinic in Harrisonburg, hospitals and/or hospice locally or at home. Medical school admissions counselors who know about our service learning requirement are noticeably excited about the potential for our students to have more medical experience than the average applicant. As an advisor, remember to emphasize the opportunity for service learning to be a striking addition to applications for post-Bridgewater education to your students.

If you have any questions or comments about the prerequisites outlined in this document, please do not hesitate to contact:

Dr. Robyn Puffenbarger, Assistant Professor of Biology
Bridgewater College
540-828-5713 (voice)
540-828-5661 (fax)
rpuffenb@bridgewater.edu

Medical School - allopathic (traditional MD) or osteopathic (DO)

- Highly competitive admissions, with students needing the “total package” of GPA, MCAT score and medical experience. For example, the Class of 2008 at the Medical College of Virginia in Richmond had an average GPA of 3.53, MCAT scores of 29, and age of 24. While GPA is not the only criteria for admission to medical school, it is virtually impossible to have a competitive application at 22 yrs old with a GPA of less than 3.0.
- Medical College Admission Test (MCAT), usually taken in the junior year of undergraduate studies that emphasizes knowledge in reading, math, physics, chemistry, and biology. Traditionally, Bridgewater students score lower than national averages on the MCAT. If a student has exceptional strengths in the other package areas (GPA and experience), then a lower MCAT score may not be too detrimental to their application. To prepare for the MCAT, students should:
 - Take general chemistry freshman year followed by organic chemistry as a sophomore
 - Take physics as a junior
 - Take a lighter course load, suggest 12 credits, in the spring of their junior year. Students should then schedule large blocks of time every day to review material and practice test questions for the MCAT
 - There are a number of MCAT study guides and preparations including the Kaplan course
- Students must have the equivalent of a four year, undergraduate degree (BS or BA) in any subject to be admitted to medical school. Contrary to popular belief, every medical school applicant does not need a science degree, in fact, 20% of matriculated students were not science majors as undergrads! However, the majority of medical school applicants were science majors as undergraduates. The prerequisites for medical school and the Bridgewater equivalents are listed in the next bullet. Medical schools are very strict about these prerequisites, so a student can have a psych/soc/English/chemistry degree as an undergraduate, but they must have these courses completed before beginning medical school.
- A degree granted by Bridgewater would need these courses to meet medical school admission requirements:
 - English, 6 semester hours (Eng 101/102)
 - College math, 6 semester hours (Math 110/120/130/200)
 - Biology, 8 semester hours (Bio 207/208)*
 - General Chemistry, 8 semester hours (Chem 161/162)
 - Organic Chemistry, 8 semester hours (Chem 305/306)
 - Physics, 8 semester hours (Phys 218/219 or Phys 221/222)
 - * more biology is suggested but not required, previous Bridgewater graduates strongly recommend microbiology, biochemistry, human anatomy, histology and honors/independent study with cadaver work to prepare adequately for the first year.
- Where Bridgewater students now? University of Virginia (MD), Eastern Virginia Medical School (EVMS, MD), Virginia Tech (DO), West Virginia School of Osteopathic Medicine (DO), West Virginia University (MD)

Podiatry School- Doctrine of Podiatric Medicine

- Mildly competitive admissions, with students needing the “total package” of GPA, MCAT score and medical experience. For podiatry schools the lowest accepted GPA varies from 2.5-3.0 (4.0 scale). The average MCAT score is 21, and the GRE can be accepted depending on the school’s admission policy.
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 - There are a number of MCAT study guides and preparations including the Kaplan course
- Students must have the equivalent of a four year, undergraduate degree (BS or BA) in any subject to be admitted to podiatry school. The prerequisite for podiatry school and Bridgewater equivalents is listed below.
- A degree granted by Bridgewater would need these courses to meet podiatry school admission requirements:
 - English, 6 semester hours
 - Math, 6 semester hours
 - Biology, 12 semester hours
 - General Chemistry, 8 semester hours
 - Organic Chemistry, 8 semester hours (a semester course in biochemistry with laboratory can substitute for one semester of organic chemistry)
 - Physics, 8 semester hours
 - Other recommended biology electives to prepare for podiatry school include cell/molecular biology, genetics, anatomy, physiology and biochemistry
- There are currently 8 schools throughout the United States that are strictly podiatry schools: Arizona Podiatric Medicine Program (Glendale, AZ), Barry University (Miami, FL), California School of Podiatric Medicine (Oakland, CA), College of Podiatric Medicine (Des Moines, IA), New York College of Podiatric Medicine (New York, NY), Ohio College of Podiatric Medicine (Cleveland, OH), Scholl College of Podiatric Medicine (Chicago, IL), Temple University (Philadelphia, PA). We have a 2006 graduate planning a career in podiatry.

Veterinary School - Doctor of Veterinary Medicine

- Highly competitive admissions, with students needing strong GPA, admission scores, and animal experience. While there are four medical schools in Virginia (EVMS, UVa, MCV and VA Tech) accepting approximately 400 students per year, there is only one vet school in Virginia (VA Tech) accepting 80-100 students per year. The Tech program serves as the regional vet school for Virginia and Maryland, guaranteeing admission to a certain number of Virginia and Maryland residents each year. It is in a student's best interest to apply to vet programs in their state of residence where they are most likely to gain admission with additional applications to out-of state schools, just in case. There is also the possibility of attending Ross University in the Caribbean. One vet practicing in our local area attended Ross and has been positive in comments about the experience.
- Each vet school has an admissions test requirement, but they vary from school to school. VA Tech requires the general GRE exam.
- While most students attending vet school will have a four year degree (BS or BA) in biology, this is not an absolute requirement. Check the prerequisite guide below for courses necessary for vet school. Also, Bridgewater does have an accelerated degree program with VA Tech. A student must complete all biology major and general education requirements to apply in their junior year to VA Tech. If accepted, the student leaves Bridgewater after their third year for the first year of vet school at Tech. After satisfactory completion of the first year of vet school, the courses transfer back to Bridgewater, the student can participate in May graduation and receive a B.Sci. in biology from Bridgewater.
- A degree granted by Bridgewater would need to include these courses to meet VA Tech vet school admission requirements:
 - English, 6 semester hours (Eng 101/102)
 - College math, 6 semester hours (Math 110/120/130/200)
 - General Biology, 8 semester hours (Bio 207/208)
 - General Chemistry, 8 semester hours (Chem 161/162)
 - Organic Chemistry, 8 semester hours (Chem 305/306)
 - Physics, 8 semester hours (Phys 218/219 or Phys 221/222)
 - Biochemistry, 3 semester hours (Bio/Chem 405)
 - Humanities, 6 semester hours (History / Political Sciences / Philosophy / Religion / English / Language courses from the general education requirements)
 - Genetics & microbiology suggested electives (Bio 309 and Bio 400)
- For students and advisors, it is incredibly important to realize that each vet school has slightly different in requirements for admission. Students should very carefully examine admission documents to make absolutely certain they are getting the courses required!
- Where are Bridgewater students now? Va Tech, Ohio State and Colorado. We also have a 2005 BC grad attending Ross University in the Caribbean!

Dental School - Doctor of Dental Science Degree

- Highly competitive admissions again stressing a “total package” in applicants with strong GPA, admission scores, and dental experience. Like vet school, students have a much better chance of gaining dental school admission in their state of residence, so West Virginia residents should apply to WVU while Virginia residents would apply to VCU.
- Dental Admissions Testing (DAT) exam scores are required at VCU and WVU. The DAT is like other standardized tests in format. The scope of the test includes: biology, general chemistry, organic chemistry, reading comprehension, math (including algebra, geometry, and statistics), and perceptual abilities (angles, projections, rotations).
- Admission to dental school requires a four year, undergraduate degree (BS or BA) in any discipline with the course work listed in the next bullet. While a degree in biology is not a requirement, most dental students prepared as undergraduates through majoring in science.
- A degree granted by Bridgewater would need these courses to meet VCU dental school admission requirements:
 - General Biology, 8 semester hours (Bio 207/208)
 - General Chemistry, 8 semester hours (Chem 161/162)
 - Organic Chemistry, 8 semester hours (Chem 305/306)
 - Physics, 8 semester hours (Phys 218/219 or Phys 221/222)
 - VCU dental admissions strongly suggests these courses in addition to the requirements above: general microbiology (Bio 410), physiology (Bio 314 - human), genetics (Bio 309), cell biology (Bio 325) and biochemistry (Bio 405)
- For students and advisors, it is incredibly important to realize that each dental school has slightly different in requirements for admission. Students should very carefully examine admission documents to make absolutely certain they are getting the courses required!
- Where are Bridgewater students now? We have one student who started dental school at West Virginia University in fall 2004. He strongly recommends human anatomy and a project involving cadaver work to get a jump on the course work of the first semester. As for interesting exams, in dental anatomy one exam is 100 cups with one tooth in each cup, students must name each tooth!

Optometry School - Doctor of Optometry Degree

- Fairly competitive admissions again stressing a “total package” in applicants with strong GPA, OAT scores, and optometry experience.
- Optometry Admissions Test (OAT) exam scores are required at most optometry schools. The test examines basic knowledge in biology, general chemistry, organic chemistry, reading comprehension, physics and mathematical skills.
- Admission to optometry school requires an undergraduate degree (BS or BA) in any discipline with the course work listed in the next bullet. While a biology degree is not a requirement, most optometry students prepared as undergraduates via biology.
- A degree granted by Bridgewater would need these courses to meet the Pennsylvania College of Optometry school admission requirements:
 - Biology, 8 semester hours (Bio 207/208)
 - General Chemistry, 8 semester hours (Chem 161/162)
 - Organic Chemistry, 8 semester hours (Chem 305/306)
 - Either molecular biology or biochemistry (lab recommended - Bio 325 or Bio 405)
 - English, 6 semester hours (Eng 101/102)
 - Math, 6 semester hours calculus highly recommended but 3 semester hours of calculus fulfills requirement (Math 120/130)
 - Microbiology or Bacteriology, 4 semester hours (Bio 400)
 - Physics, 8 semester hours (Phys 218/219 or Phys 221/222)
 - Psychology, 3 semester hours (Psy 200)
 - Statistics, 3 semester hours (Math 200)
- For students and advisors, it is incredibly important to realize that each optometry school has slightly different in requirements for admission. Students should very carefully examine admission documents to make absolutely certain they are getting the courses required!
- Where are Bridgewater students now? There are several students (sophomores and juniors) interesting in pursuing an optometry degree and one 2006 graduate is accepted for fall 2007 enrollment at Ohio State.

Medical Technologist - Hospital Laboratory Specialists

- Admissions are not as competitive to this degree program as medical school, but the selection process is rigorous since students need strong GPA and supporting course work to enter these programs.
- Bridgewater has two articulation agreements, one with Rockingham Memorial Hospital (RMH) and one with Augusta Medical Center (AMC) for students to leave after their junior year at Bridgewater, complete one year of medical technology study and return for spring graduation. Students must take a combination biology-med tech senior comprehensive exam administered by Dr. Gavin Lawson in the biology department of Bridgewater as a graduation requirement. Students may also finish four years at Bridgewater, usually with a biology degree (B.Sci.), and then attend a medical technology program.
- A degree granted by Bridgewater would need these courses to meet the Rockingham Memorial Hospital admission requirements:
 - 16 semester hours of biology (Bio 207/208) that must include both microbiology (Bio 400) and immunology (Bio 410)
 - 16 semester hours chemistry (Chem 161/162) that can followed by either organic/biochemistry cycle the student chooses (Chem 305/306, Bio 405 OR Chem 250/315)
 - College math, 3 semester hours (Math 110/120/130)
 - Additional recommended courses: statistics (Math 200), genetics (Bio 309) and computer science (CIS 103)
- Most Bridgewater students apply to three programs: RMH, AMC and Virginia Commonwealth University (VCU). It is important to meet the admissions counselors from each school to discuss the admission requirements and student plans for the early enrollment program.
- A number of Bridgewater students go to RMH and AMC every year after graduation or with the early admission program. One Bridgewater graduate is in the VCU program doing a combined medical technology and molecular diagnostics master's program (began program in fall 2004).

Physician's Assistant (PA) Programs in Virginia

- Admissions to a physician's assistant program is not as competitive as medical school, but in order to have a competitive packet, students should have a GPA of at least a 3.0 with grades of no less than a C in required courses.
- There are four PA programs in Virginia: EVMS (Eastern Virginia Medical School in Norfolk), JMU, Jefferson College of Health Sciences (Roanoke) and Shenandoah University. Each requires slightly different course work and admission tests, and all but Jefferson require a four year, undergraduate degree (BA or BS). The program at Jefferson would allow students to have a second bachelor's degree (PA B.Sci.).
- A degree granted by Bridgewater would need these courses to meet the requirements for the four programs in Virginia (as of February 2005, check websites for current information):

	EVMS	JMU	Jefferson	Shenandoah
Biology		Bio 309 - genetics		Bio 309 - genetics
	Bio 305 - human anatomy	Bio 305 - human anatomy	Bio 305 - human anatomy	Bio 305 - human anatomy
	Bio 314 - human physiology	Bio 314 - human physiology	Bio 314 - human physiology	Bio 314 - human physiology
	Bio 400 - microbiology		Bio 400 - microbiology	Bio 400 - microbiology
Chemistry	Chem 125	Chem 125	Chem 161/162	Chem 125
	Chem 250 or 315	Chem 250	Chem 250	Chem 250
		Chem 315	Chem 315 or Biol 325 (biochemistry or cell biology)	Chem 315
Math	Math 110 or 200		Math 200 or Bio 330 (statistics)	Math 110, 120, 200 prefer statistics
Psychology	Psy 200 and 360		Psy 200 and one of the following: Psy 320 or 360	Psy 200 and 360
Sociology			3 semester hours above 100 level, suggest Soc 317	
Humanities	Eng 101/102			
Medical Terminology	1 credit hour, offered at BRCC, Massanutten Technical Center	1 credit hour, offered at BRCC, Massanutten Technical Center		1 credit hour, offered at BRCC, Massanutten Technical Center

- Where are Bridgewater students now? Several graduates are now attending the JMU-PA program and another student will soon complete the EVMS program.

Nursing after Bridgewater - Vanderbilt and other options!

- Bridgewater has an articulated agreement with Vanderbilt University (Nashville, TN) for a 3+2 program in nursing. Students who complete this very rigorous program would have a B.Sci. in biology from BC and an M.S. in nursing from Vanderbilt. Please see Dr. Puffenbarger for a complete guide to course work necessary at BC for admission to Vanderbilt.
- Students can complete a degree at Bridgewater and then turn to a nursing program after graduation. There are several routes a student could take to nursing after BC including an accelerated second bachelor's (VCU and Shenandoah) and accelerated master's program (VCU and UVa). Admission requirements to each program in Virginia are listed below (as of September 2005). Students must check very carefully with each school for prerequisites and admissions policies.

	VCU - BS	VCU - MS	Shenandoah-BS	UVa - MS
Degree	4 yr, not nursing	4 yr, not nursing	4 yr, not nursing	4 yr, not nursing
Entrance Exams	GRE, ACT or SAT	GRE		GRE
Biology	Bio 305 - human anatomy	Bio 305 - human anatomy	Bio 305 - human anatomy	Bio 305 - human anatomy
	Bio 314 - human physiology	Bio 314 - human physiology	Bio 314 - human physiology	Bio 314 - human physiology
	Bio 400 - microbiology		Bio 400 - microbiology	
Chemistry			Chem 161	
English			Eng 101 or 102 plus a literature course	
Nutrition			FCS 240 or 350 or 455	
Math		Statistics, Math 200 preferred, Bio 330 acceptable	Math 200	Math 200
Psychology	Psy 200 and 360	Psy 200 and 360	Psy 200 and one of the following: Psy 320 or 360	Psy 200 and 360
Sociology			Soc 101	
Phil/Religion			Rel 220	
GPA Minimum	2.5		3.0	3.0

- To help find the right nursing program, check out <http://www.allnursingschools.com/> for links and FAQ's.