The Pre-Health Professional Curriculum at UWRF

The Biology major, Biomedical track, includes courses meant to meet the requirement for a Bachelor of Science degree in Biology, as well as prepare the student for a career in many areas of biomedical research or graduate/professional school. Students must also declare a minor and meet all of the requirements for that as well. “Pre-med, pre-dent, pre-physical therapy, pre-physician assistant etc. are not majors on their own.

For the pre-med, pre-dent, pre-physician assistant, and pre-chiropractic student, a minor in chemistry is the logical choice, since a year of general chemistry, a year of organic chemistry, and a year of biochemistry are required or recommended for admission to these professional schools. Because some of the other health-professional schools require several courses from many departments, an “Option B” minor is advised, allowing students to compile a selection of classes to meet the requirements.

The courses listed below are the pre-requisite courses required by most professional schools in a particular field. Your primary advice regarding courses and preparation for future careers should be obtained from your faculty advisor. Faculty are equipped to give suggestions as to selection and sequence of courses that will match your abilities and interests. Advisors will give advice, but the final responsibility for proper course selection and completion of graduation requirements rests with you.

A high GPA is important if you are to be a competitive applicant for a health professions program. It is important to get off to a good start, and to adopt good, strong study habits right away. It is very stressful to have a bad first semester or two and then spend the rest of your college career digging yourself out of that hole.

Having said that, GPA is not the only thing that professional schools consider when examining an application for admission. Look at the Health Careers Puzzle on the next page for some insight into the other qualities, skills and experiences that will You can spend your college years developing your writing and speaking skills. Other skills such as leadership. listening and teamwork are also critical for working in the health fields. Volunteering shows commitment to humanity and the community. Shadowing and internships are of great value in exploring and field and determining if you are suitable for a particular profession.
The Pre-med Society, the Pre-Physical Therapy (and Occupational Therapy, and Pre-Pharmacy majors at River Falls have active clubs and welcome new members to join. They can be found on the ORgSync Web site, or look for their bulletin boards on the 4th floor of AgSci.

The following web sites can also give you more information about preparing for a health career.

http://www.healthcareers.umn.edu/
http://explorehealthcareers.org/en/home
http://www.bls.gov/oco/
Pre-Medical (Osteopathic and Allopathic), Pre-Dental or Pre-Optometry,

The recommended curriculum below is suggested to meet both the required and recommended pre-requisites of most of the schools, as well as to prepare you for the Medical College (MCAT), Optometry (OAT), or Dental Admission Test (DAT). Additional courses are required to meet requirements for the biology degree and for graduation.

Biology
Biology 150 (General Biology)  
Biology 230 (General Zoology)  
Biology 240 (Cell Biology)  
Biology 324 (Microbiology)  
Biology 341 and 342 (Anatomy and Physiology I and II)  
Biology 350 (Genetics)  
Keep in mind that additional biology courses are required for the Biology major.

Chemistry
Chemistry 121 and 122, (General Chemistry 1 and 2)  
Chem 231, 232 236, 237 (Organic Chemistry 1 and 2)  
OR  
Chemistry 130 and 233 (Introduction to and Foundations of Organic Chemistry)  
Chemistry 240 and 250 (Foundations of Inorganic and Analytical Chemistry)  
Optometry School – also Chemistry 361 (Biochemistry)  
Dental School – also Chemistry 361, most with lab  
Medical School – also Chemistry 361 and 362 strongly recommended

Physics
Physics 151 and 156, (Algebra-Based Physics I and Lab)  
Physics 152 and 157 (Algebra-Based Physics II and Lab)  
OR  
Calculus based Physics series

Math
Optometry School – Math through Math 166 (Calculus), a select few require a second semester of Calculus; Statistics is required  
Dental School – No math prerequisite, but Geometry, Algebra, and Trigonometry are covered in the DAT, Statistics is required  
Medical School – Most require or recommend Math through Math 166 (Calculus); Statistics is required

Generals
Psych 101 (Introduction to Psychology)  
SCTA 101 (Speech)  
Sociology 100  
English 100 and 200 are usually required or strongly recommended.  
Writing intensive or literature classes are also required by some (Univ. of MN)  
Most want to see humanities, upper level humanities, social/behavioral sciences
Physician Assistant

The recommended curriculum below is suggested to meet both the required and recommended pre-requisites of most of the schools. Additional courses are required to meet requirements for the biology degree and for graduation.

Biology requirements include
- Biology 150 (General Biology)
- Biology 230 (General Zoology)
- Biology 240 (Cell Biology)
- Biology 243 (Biological Greek and Latin)
- Biology 324 (Microbiology)
- Biology 341 and 342 (Anatomy and Physiology I and II)
- Biology 350 (Genetics)

Keep in mind that additional biology courses are required for the Biology major.

Chemistry
- Chemistry 121 and 122, (General Chemistry 1 and 2)
- Chem 231, 232, 236, 237 (Organic Chemistry 1 and 2)
- OR
- Chemistry 130 and 233 (Introduction to and Foundations of Organic Chemistry)
- Chemistry 240 and 250 (Foundations of Inorganic and Analytical Chemistry)

- Chemistry 361 and 362 (Biochemistry)

Math
- LaCrosse requires 149 (Pre-calculus) or 166 (Calculus)

Statistics

Psychology
- Psychology 101 (introduction to Psychology),
- Psychology 236 (Childhood and Adolescence)
- Psychology 336 (Adulthood and Aging)
- Some also require 325 (Abnormal Psychology)

Generals
- Most require speech (CSTA 101)

Most schools require applicants to complete the GRE Exam. Most schools require clinical experience for admission.
Occupational Therapy

The recommended curriculum below is suggested to meet both the required and recommended pre-requisites of most of the schools. Additional courses are required to meet requirements for the biology degree and for graduation.

**Biology** requirements include
Biology 150 (General Biology)
Biology 240 (Cell Biology)
Biology 341 and 342 (Anatomy and Physiology I and II)
Bio 243 (Biological Greek and Latin)
Keep in mind that additional biology courses are required for the Biology major

**Chemistry**
There is no chemistry requirement

**Psychology**
Psychology 101 (introduction to Psychology),
Psychology 236 (Childhood and Adolescence)
Psychology 336 (Adulthood and Aging)
Some also require 325 (Abnormal Psychology)

**Physics**
Physics 151 and 156, (Algebra-Based Physics I and Lab)

**Math**
Statistics (Math 226, or Psychology 201)

Sociology 101

OPTION B MINOR (22 credits) can include
Physics 152, 157 (Algebra Based Physics ii)
PED 354 (Biomechanics)
Health 315 (Nutrition)
Psychology 325 (Abnormal Psychology)
PED 245 Motor Development Throughout Life
Other appropriate Psychology or Health and Human Performance classes

A minor in psychology might also be appropriate.
Physical Therapy

The recommended curriculum below is suggested to meet both the required and recommended pre-requisites of most of the schools. Additional courses are required to meet requirements for the biology degree and for graduation.

Biology requirements include
- Biology 150 (General Biology)
- Biology 230 (General Zoology)
- Biology 341 and 342 (Anatomy and Physiology I and II)
Keep in mind that additional biology courses are required for the Biology major

Chemistry
- Chemistry 121 and 122, (General Chemistry 1 and 2)

Math
- University of Minnesota requires 1 semester of Calculus (Math 166)
- Statistics (Math 226)

Physics
- Physics 151 and 156, (Algebra-Based Physics I and Lab)
- Physics 152 and 157 (Algebra-Based Physics II and Lab)
- OR
- Calculus based Physics series

OPTION B MINOR (22 credits) consisting of
- Physics 152, 157 (Algebra Based Physics II)
- Math 166 (not all schools require Calculus, but UM does)
- Psych 236 (Childhood and Adolescence)
- Psych 336 (Adulthood and Aging)
- Psych 325 (Abnormal Psychology)
- PED 354 (Biomechanics)
- Heal 315 (Nutrition)
- Heal 366 (Exercise Physiology)

Most Physical Therapy schools require a number (usually 100) hours of observation prior to admission. Completion of the GRE exam is also required.

Note: A biology major/Biomedical Sciences option will provide good preparation for physical therapy programs. A major in Health and Human Performance (Option II) may be appropriate for students with secondary interest in sports training, rehabilitation, or kinesiology.
Chiropractic

The recommended curriculum below is suggested to meet both the required and recommended pre-requisites of most of the schools. Additional courses are required to meet requirements for the biology degree and for graduation.

Biology requirements include
Biology 150 (General Biology)
Biology 230 (General Zoology)
Biology 324 (Microbiology)
Biology 341 and 342 (Anatomy and Physiology I and II)
Keep in mind that additional biology courses are required for the Biology major

Chemistry
Chemistry 121 and 122, (General Chemistry 1 and 2)
Chem 231, 232, 236, 237 (Organic Chemistry 1 and 2)
OR
Chemistry 130 and 233 (Introduction to and Foundations of Organic Chemistry)
Chemistry 240 and 250 (Foundations of Inorganic and Analytical Chemistry)
Chemistry 361 (Biochemistry) is recommended

Physics
Physics 151/156 (Algebra based Physics with lab) and one of the following
   Physics 152/157 (2nd semester physics)
   PED 354 (Biomechanics)
   Math 226 (Stats)

Psychology
Psychology 101 (General Psychology)

Social Sciences/Humanities
At least 15 credits

Additional Requirements
Speech is recommended
For More Information, contact

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MD
http://www.mommd.com/toughdecision.shtml
https://www.aamc.org/students/applying/mcat/
https://www.aamc.org/students/applying/amcas/

Dentist
http://www.adldentallabs.com/dental/dentist.htm
http://www.dentistry.umn.edu/
http://www.ada.org/aboutada.aspx

OT
http://www.aota.org/Students/Prospective/OT.aspx
http://www.aota.org/Consumers.aspx

PA
http://www.aapa.org/
http://www.bls.gov/oco/ocos081.htm
https://portal.caspaonline.org/

OPT
http://www.opted.org/i4a/pages/index.cfm?pageid=3444