

Admission to Biomedical, Health Professions, and Veterinary Medicine Programs

Minimum Undergraduate Course Requirements

This chart will help first-year students get started in planning for possible admission to health professions graduate programs. These courses represent the minimal requirements and most schools (especially medical schools) have additional course requirements. Students should check the admissions standards for individual schools. **If students take the more rigorous sciences and math, all schools are satisfied and all options remain open.** † Specific advising related to entrance to health professions schools is also available in the Eberly College of Science Advising Center, 213 Whitmore Building. Students considering any of these programs should work closely with their academic adviser regarding their interests and choice of Penn State major.

Professional School Penn State Courses	Medicine (MD/DO)	Chiropractic, Optometry, Podiatry	Dentistry	Physical Therapy	Physician Assistant	Nursing*
Web Sites	www.ama-assn.org www.acsm.org	www.chirocolleges.com www.aaopt.org www.aacpm.org	www.ada.org	www.APTA.org	www.aapa.org	www.aacn.nche.edu/Media/FactSheets/
B M B 211/212 or 401/402	Typically not required	Typically not required Optometry B M B 211 preferred	Typically recommended but not typically required	Typically not required	Typically not required	Typically not required
BIOL 110	Required	Required	Required	Required	Required	Typically not required
BIOL 129, 141/142	Typically not required	Typically not required Optometry varies	typically not required	Required	Required	Required
BIOL 230W or 240W	Required (C)	Often required	Required (D)	Varies by program	Varies by program	Typically not required
CHEM 110, 111, 112, 113	Required	Required	Required	Required	Required	Varies by program
CHEM 210, 212, and 213 (8 credits)	Required Some schools accept CHEM 202/203 (6 cr.) Good prep for MCAT	Required Some schools accept CHEM 202/203 (6 cr.)	Preferred Some schools accept CHEM 202/203 (6 cr.)	Varies by program Some schools accept CHEM 202/203 (6 cr.)	Varies by program	Typically not required
MICRB 106/107 or 201/202	Typically not required	Typically not required Optometry MICRB 201/202 preferred	Typically recommended but typically not required	Typically not required	Often required	Required
MATH	022 or higher required (A)	022 or higher required *Optometry MATH 140	022 or higher required (A)	021 or higher required	021 or higher required	022 or higher required
PHYS 250/250P and 251/251P	Required (B)	Required (B)	Required (B)	Required (B)	Typically not required	Typically not required
PSYCH 100	Varies by program	Varies by program	Varies by program	Required	Required	Required
PSYCH 212	Typically not required	Typically not required	Typically not required	or 270 or 470 Required	Varies by program	or HD FS 129 required
PSYCH 270 or 470	Typically not required	Typically not required	Typically not required	or 212 required	Typically not required	Typically not required
STAT 200, 240 or 250	Varies by program	Varies by program	Varies by program	Required	Required	Required

† If students take the more rigorous sciences and math, all schools are satisfied and all options remain open.

* BS in Nursing is a second degree. Some schools also require nutrition and genetics (e.g., NUTR 251, BIOL 222).

(A) Some medical schools require Calculus. For adequate preparation for Calculus, students applying to schools requiring Calculus will need MATH 022, MATH 026; or MATH 040; or MATH 041 or satisfactory performance on the Mathematics proficiency examination as prerequisites.

(B) For adequate preparation for PHYS 250, students will need the following prerequisites: MATH 022, MATH 026; or MATH 040; or MATH 041 or satisfactory performance on the Mathematics proficiency examination. Note - some medical schools require PHYS 211 and 212; check the entrance requirements for schools you are considering.

(C) BIOL 110 and 230W are recommended to help students prepare for the required MCAT examination.

(D) BIOL 110 and 230W are recommended to help students prepare for the required DAT examination.

Admission to Biomedical, Health Professions, and Veterinary Medicine Programs Minimum Undergraduate Course Requirements

This chart will help first-year students get started in planning for possible admission to health professions graduate programs. These courses represent the minimal requirements, and most schools (especially medical schools) have additional course requirements. Students should check the admissions standards for individual schools. **If students take the more rigorous sciences and math, all schools are satisfied and all options remain open.** † Specific advising related to entrance to health professions schools is also available in the Eberly College of Science Advising Center, 213 Whitmore Building. Students considering any of these programs should work closely with their academic adviser regarding their interests and choice of Penn State major.

Professional School Penn State Courses	Occupational Therapy	Genetic Counseling	Pharmacy	Veterinary Medicine
Web Sites	www.aota.org	www.nsgc.org	www.aacp.org	www.aavmc.org
B M B 211/212 or 401/402	Typically not required	Typically not required	Varies by program	1 or 2 semesters required
BIOL 110	Required	Required	Required	Required
BIOL 129, 141/142	Required	Recommended	Varies by program	Higher level ANAT and PHYS desired
BIOL 230W or 240W	Typically not required	230W required	Required	Required
CHEM 110, 111, 112, 113	Varies by program	Required	Required	Required
CHEM 210, 212, and 213 (8 credits)	Typically not required	Required Some schools accept CHEM 202/203 (6 cr.)	Required	Required Some schools accept CHEM 202/203 (6 cr.)
MICRB 106/107 or 201/202	Typically not required	Typically not required	Varies by program	201/202 recommended
MATH	Varies by program	022 or higher required Varies by program	Typically requires Calculus	Typically requires calculus Varies by program
PHYS 250/250P and 251/251P	Varies by program	Typically not required	Required	Required
PSYCH 100	Required	Required	Varies by program	Typically not required
PSYCH 212	Required	Required	Typically not required	Typically not required
PSYCH 270 or 470	Required	Recommended or required	Typically not required	Typically not required
STAT 200, 240 or 250	Required	Required	Varies by program	Varies by program STAT 250 recommended

† If students take the more rigorous sciences and math, all schools are satisfied and all options remain open.

* BS in Nursing is a second degree. Some schools also require nutrition and genetics (e.g., NUTR 251, BIOL 222).

(A) Some medical schools require Calculus. For adequate preparation for Calculus, students applying to schools requiring Calculus will need MATH 022, MATH 026; or MATH 040; or MATH 041 or satisfactory performance on the Mathematics proficiency examination as prerequisites.

(B) For adequate preparation for PHYS 250, students will need the following prerequisites: MATH 022, MATH 026; or MATH 040; or MATH 041 or satisfactory performance on the Mathematics proficiency examination. Note - some medical schools require PHYS 211 and 212; check the entrance requirements for schools you are considering.

(C) BIOL 110 and 230W are recommended to help students prepare for the required MCAT examination.

(D) BIOL 110 and 230W are recommended to help students prepare for the required DAT examination.

Updated 11/2008