

Biology Major - Pre-Physician Assistant Guide (Pre-Med Option) 2023-2024

Document available online at <https://ib.oregonstate.edu/undergraduate/advising/college-advising-guide>.

The biology major pre-medicine option is designed to allow students interested in medicine, pharmacy, physician assistant and some other professional programs to optimally meet the requirement for their professional goal in the context of their biology major. **This document outlines the requirements for students interested in becoming a physician assistant** (see the other option documents for medicine, pharmacy, and dentistry), and the listed courses will meet the prerequisites for most AAPA accredited physician assistant programs in the U.S. Students should always consult the requirements of all schools to which they plan to apply, and many physician assistant programs will not accept some online pre-requisite science courses (especially those with online labs) or prerequisite classes from study abroad programs.

A 3.0 GPA is required to complete the pre-medical option. Courses used to satisfy option requirements also satisfy the Biology and Society, Organismal Biology, Physiology, Writing Intensive Course (WIC), Physics or Computer Science and Quantitative Applications and Experiential Learning or Integrative Biology Elective requirements in the biology major. **Previous versions of this option are different and are tracked in MyDegrees. All courses and prerequisites are subject to change, and the listing of terms offered is based on projected Corvallis campus offerings.**

Core Coursework:

Course	Description (credits)	Term(s)	Pre-requisites	Comments
KIN 132	Introduction to the Allied Health Professions* (1)	Sp	-	*By approval in place of BI 109
PHAR 210	Terminology of the Health Sciences (2cr)	F, W	-	-
PSY 201 & PSY 202	General Psychology (4cr, 4cr)	All	-	-
SOC 204	Introduction to Sociology (3cr)	All	-	-
PHL/REL 444	Biomedical Ethics* (4cr)	All	Sophomore+ for PHL/REL 444	*BC: Sci. Technology & Society; Ecampus all but summer term
PH 201, 202, 203	General Physics* (5cr, 5cr, 5cr)	All	MTH 112 (C-)	*Taken in order

Writing Intensive Course (Select one course from the following):

Course	Description (credits)	Term(s)	Pre-requisites	Comments
BI 319	Theory, Practice, Discourse Life Sciences (3cr)	F, W, Sp	BI 221, 222, 223 (C-) & ST 351	-
MB 385	Emerging Infections Disease & Epidemics (3cr)	W	BI 221, 222, 223	-

Medicine, Health and Society (Select one course from the following):

Course	Description (credits)	Term(s)	Pre-requisites	Comments
ANTH 352	Anthropology, Health, and Environment* (3cr)	F*	-	*Ecampus only; BC: Contemporary Global Issues
ANTH 374	Anthropology and Global Health (3cr)	Sp	-	-
ANTH 383	Introduction to Medical Anthropology* (3cr)	F, Su	-	*BC: Contemporary Global Issues
BB 220	Cancer: Society's Malignant Shadow (3cr)	Sp	-	-
BB 332	Molecular Medicine (3cr)	F	BI 221 (C-)	-
BI 175	Genomes, Identities and Societies (3cr)	W	-	-
H 312	HIV/AIDS and STI's in Modern Society (3cr)	F, Sp	-	Sophomore+
H 332	Climate and Health (3cr)	F	-	-
H 333	Global Public Health (3cr)	F*, W*	-	*Ecampus only
HSTS 417	History of Medicine (4cr)	All*	-	*Ecampus only, sophomore+
MB 330	Disease and Society (3cr)	W*, Sp*, Su*	-	*Ecampus only

Human Anatomy and Physiology:

Course	Description (credits)	Term(s)	Pre-requisites	Comments
BI 331-333 & 341-343	Advanced Human A&P (3cr, 3cr, 3cr) Advanced Human A&P, Lab (2cr, 2cr, 2cr)	F, W, Sp F, W, Sp	BI 221, 222, 223 (C-); CH 233/263 (C-)	Junior+, must be taken in order and together

Experiential Learning or Biological Science/Psychology Elective Course (select one of two tracks below):

Track I: Select any combination of 3 credits from the following

Course	Description (credits)	Term(s)	Pre-requisites	Comments
BI 309 OR 409	Teaching Practicum OR Advanced Practicum (1-3cr)	F, W, Sp	By department approval*	*See form here
BI 401	Research and Scholarship (1-3cr)	All	By department approval*	*See form here
BI 410	Internship (1-3cr)	All	By department approval*	*See form here

(Track II on Page 2)

Track II: Biological Science/Psychology Elective (select one course from the following)

Course	Description (credits)	Term(s)	Pre-requisites	Comments
BB 460	Advanced Cell Biology (3cr)	Sp?*	(BB 314 or BB 451 or BB 492) (C-)	*Currently not taught
BI 451	Functional Anatomy of the Human Muscular System (4cr)	Su*	BI 331, 332, 333, 341, 342, 343	*By application only
BI 485	Monster Biology (3cr)	W	BI 311*, 370*	*Can be concurrent, junior+
BI 495	Disease Ecology (3cr)	W?*	BI 370 (C-)	*Currently not taught
MB 416	Immunology (3cr)	F	BB 450* or BB 490*	*Can be concurrent, MB 417 lab is optional
MB 436	The Human Microbiome (3cr)	Sp	BB 314 or MB 302	-
MB 480	General Parasitology (3cr)	F*	BI 221, 222, 223 (C-)	*Ecampus only?
NUTR 417	Human Nutrition Science (4cr)	F	BB 450, BB 451 (C-)	-
NUTR 418	Human Nutrition Science (4cr)	W	BB 450, BB 451 (C-)	-
PSY 350	Human Lifespan Development (4cr)	F, W, Sp	PSY 201, 202	Sophomore+
PSY 381	Abnormal Psychology (4cr)	F, W, Sp, Su	PSY 201, PSY 202	Sophomore+
PSY 433	Psychopharmacology (4cr)	W	-	Junior+
TOX 411	Fundamentals of Toxicology (3cr)	F	(BB 350 or BB 450 or BB 490)	-
Z 371*	Vertebrate Biology (3)	F	BI 221, 222, 223 (C-)	*Z 372 lab is optional
Z 425	Embryology and Development (5cr)	F	BI 311, BB 314	Junior+,
Z 438 OR BB 360	Behavioral Neurobiology (3cr) OR Introduction to Neuroscience (3cr)	Sp W	BI 221, 222, 223 (C-), CH 233/263 (C-) BI 221, 222, 223 (C-), CH 233/263 (C-)	-

Information and Resources:

Applying to Physician Assistant School

- **Admission Test:** Most schools require an entrance exam, often the [Graduate Record Examination \(GRE\)](#). Some schools will accept MCAT scores.
- **References:** It is important to begin establishing relationships with professors and professionals throughout your education. Applicants will generally need a minimum of three references. References who can speak about you beyond a grade you received and can address your character and professionalism will be particularly strong.
- **Medical Experience:** PA schools clinical experience requirements range from 500 to 4000 hours. Some require clinical hours to be complete before applying – check specific schools for details. Some opportunities for medical experience are listed below (research experience is not considered clinical). Typically, one can earn 2000 hours working full time in a year.
- **CASPer:** A Situational Judgment Test is required for many health professions programs, including Physician Assistant and Medical schools. [CASPer](#) is utilized to assess non-academic attributes, such as empathy, motivation, collaboration, equity, professionalism, and ethics.
- **Leadership:** Health profession schools value leadership experience as a way to develop interpersonal and team lead skills. There are a variety of ways to incorporate leadership experiences as an undergraduate like officer roles in a student club, coordinator for an organization, or being a peer mentor or ambassador for your college or department. Students may consider taking leadership courses or completing the [OSU Leadership Minor](#).

Medical Experience:

- **Internship, work, or volunteering** early is important to gain experience and clarify career choices. See [Medical & Health Profession Internship and Volunteering](#). Students are encouraged to pursue direct hands-on patient care jobs on their own, and many PA schools require that medical experience be paid. Examples of how students can gain work experience include becoming certified and working as: a Certified Nursing Assistant (CNA), a Medical Assistant, a Phlebotomist, a Medical Scribe, or an Emergency Medical Technician (EMT). It is important to verify requirements of individual schools when applying, as acceptable experience varies across institutions.
- **International Medical Internships** through OSU study abroad are a great way to prepare you for work in a diverse population, improve language and cross-cultural communication skills, and gain clinical experience through rotations. See the [Abroad in Biology and Zoology page](#) for ideas and next steps.
- **Shadowing** and other healthcare experience is a good way to get exposure to the field and to decide if medicine is for you. Learn more about [healthcare experience here](#). Details about [OSU's Medical Preceptorship program here](#).
- **CPR Certification** is required by some schools at the time of application.
- **Health Care Careers Summer Enrichment Programs** - See the following links for summer programs and searchable databases to search for summer opportunities related to health care or the research field:
 - [Summer Health Professions Education Program \(SHPEP\)](#)
 - [AAMC Summer Programs](#)
 - [Explore Health Careers Enrichment Programs](#)
 - [NAAHP Student Opportunities](#)
- **Study Abroad:** Although prerequisite professional school courses should not be done abroad, study abroad is a great opportunity and very feasible for pre-medical students. You can work with your advisor on how to schedule and apply these courses to your degree. [Abroad in BI information here](#).
- **Research Opportunities:** Although not required for PA school, research helps develop analytical and communication skills, an understanding of research methods, and the process of science. For these reasons it's good for a career in medicine. [Information on getting research experience](#).

Additional Resources:

- [American Academy of PAs](#) (click on "What is a PA" link to learn more details about this career.)
- [Physician Assistant Education Association](#)
- [Central Application Service for Physician Assistants \(CASPA\)](#)
- [Biology Careers Page-Medical and Health Care](#)
- [Explore Health Careers](#)-Learn more about the PA field as well as explore other health profession careers.
- [OHSU PA Program](#)
- [Pacific University PA Program](#)
- [Oregon Society of Physician Assistants](#)