

BIOLOGY MAJOR — Pre-Medical Option 2018-2019

Track I: Pre-Medicine

The Pre-Medicine option in Biology has two tracks. This document outlines the requirements for Track I: Pre-Medicine which is designed for students interested in becoming a physician (Track II: Pre-Physician Assistant is a separate document). Courses used to satisfy these requirements also satisfy the Biology and Society, Organismal Biology, Physiology, Writing Intensive Course (WIC) and upper division science requirements in the Biology major. A 3.0 GPA is required to complete the option. Students completing the requirements listed below will meet the prerequisites for most AAMC and AACOM accredited medical schools in the U.S. and abroad. Some medical schools will not accept online science courses (especially those with online labs) or prerequisite classes from study abroad programs. Students should always consult the requirements of all schools to which they plan to apply. Previous versions of this option are different and are tracked in MyDegrees. **All courses and prerequisites are subject to change.**

Core Coursework:			
Course	Pre(Co)requisites	Term	Credits
BI 109 Pre-Medical Orientation		SP	1
PSY 201 AND PSY 202 General Psychology		F, W, SP, SU	3,3
SOC 204 Introduction to Sociology		F, W, SP, SU	3
PHL 205 Ethics OR PHL/REL 444 Biomedical Ethics	Sophomore standing for PHL/REL 444	F, W, SP, SU	4
PH 201, PH 202, PH 203 General Physics	MTH 112 (C-)	F, W, SP, SU	5,5,5
Z 431 Vertebrate Physiology I	BI 211, 212, 213 (C-), CH 332	W	4
Z 432 Vertebrate Physiology II AND Z 442: Lab	Z 431	SP	(3+2)
Writing Intensive Course (Select one course from the following):			
BI 317 Scientific Theory and Practice	BI 211, 212, 213 (C-)	F, W?, SP?	3
BI 319 Critical Thinking & Communication in the Life Sciences	BI 211, 212, 213 (C-); ST 351	F?, W?, SP	3
MB 385 Emerging Infectious Diseases & Epidemics	BI 211, 212, 213	W	3
HSTS 417 History of Medicine	Upper-Division Standing	F, W, SP, SU	4
Medicine, Health and Society (Select one course from the following):			
ANTH 352 Anthropology, Health, and the Environment		F, W, SP, SU	3
ANTH 383 Introduction to Medical Anthropology		F, W, SP, SU	3
ANTH 474 Cross-Cultural Health and Healing		?	4
BB 332 Molecular Medicine	Any biology course	F	3
BI 420 Viruses in Modern Society		Alternate W	3
H 210 Introduction to the Health Care System		F, W, SP, SU	3
H 225 Social and Individual Health Determinants		F, W, SP	4
H 312 HIV/AIDS and STI's in Modern Society		F, W, SP, SU	3
H 320 Introduction to Human Disease		F, W, SP, SU	3
H 333 Global Public Health		F, W, SP	3
HSTS 416 History of Medicine Pre-1800		SP	4
MB 330 Disease and Society		SU	3
SOC 350 Health, Illness, and Society		F, W?, SU?	4
Track I: Pre-Medicine Elective Courses			
Biological Science/Psychology Elective (select two courses from the following)			
BB 360 Introduction to Neuroscience	BI 211, 212, 213 (C-); CH 233/263	W	3
BB 460 Advanced Cell Biology	BB 314 or BB 451 or BB 492	F	3
BI 495 Disease Ecology	BI 370	Alternate W	3
MB 416 Immunology	BB 450 or BB 490	F, SU	3
MB 436 The Human Microbiome	BB 314 or MB 302	SP	3
MB 480 General Parasitology	BB 314 or BB 450 or Z 361 or MB 302	W	3
PSY 381 Abnormal Psychology	PSY 201 and PSY 202	F, W, SP, SU	4
PSY 433 Psychopharmacology	Upper-division standing	F, SP	4
TOX 411 Fundamentals of Toxicology	BB 350 or BB 450 or BB 490	SP	3
Z 422 Comparative and Functional Vertebrate Anatomy	BI 211, 212, 213 (C-); CH 332	F	5
Z 425 Embryology and Development	BI 311 and BB 314; Junior Standing	F	5
Z 437 Vertebrate Endocrinology	BB 314	Alternate SP	4
Z 438 Behavioral Neurobiology	BI 211, 212, 213 (C-); CH 123 or CH 233/263	SP	3
Upper Division Elective (select three credits from Path I or one course from Path II)			
Path I Experiential Learning Credits (complete any combination of three credits below):			
BI 309 Teaching Practicum or BI 409 Advanced Teaching Practicum	By Approval	F,W,SP	1-3
BI 401 Research and Scholarship	By Approval	F,W,SP,SU	1-3
Path II Science Elective (select one 3+ credit upper division (300-400 level) science elective science course not used above): Courses from BB, BI, BOT, CH, MB, MTH, PH, ST, & Z including double major, minor and Bacc. Core may be used with exception of courses listed as excluded below. Other science courses outside of COS and other credits taken internationally may be used by approval. Excluded: 401-410 credits, BB 350, BB 490-492, BI 331-333, BI 341-343, CH 334, CH 335, CH 336, ST 314, and any 399 or 499 courses not approved.			

Preparing for Medical School

College of Science Preparing for Medical School webpage: Review our resources on the College of Science "Preparing for Medical School" website: <https://www.science.oregonstate.edu/premed>. Resources include the "Overview of the Premed Pathway," "Premedical Guide," procedures and deadlines for applying, FAQs, and a list of premed advisors.

Applying to Medical School

Application Seminars and Application Readiness: Application seminars are presented by the Premed Committee Coordinator(s) throughout the academic year to help prepare students who are apply for medical school at the end of the academic year (or who are graduating then). Go to the College of Science "[Premed Application](#)" page to review the steps for preparing to apply to medical school and to assess your application readiness: <https://www.science.oregonstate.edu/premed-application>.

Admission Test: Medical school applicants must take the Medical College Admissions Test (MCAT)
<https://students-residents.aamc.org/applying-medical-school/taking-mcat-exam/>.

References : It is important to establish relationships with professors and professionals early in your education. Applicants will need a minimum of four references. References that can speak about you beyond your grades and can address your character and professionalism will be particularly important. Applicants should verify letter requirements with individual schools when applying: <https://www.science.oregonstate.edu/premed-faqs>.

Leadership: Health profession schools value leadership experience as a way to develop interpersonal skills and the ability to lead as part of a team. There are a variety of ways to incorporate leadership experiences as an undergraduate, including: officer roles in a student club, coordinator for an organization (public, private, or non-profit), or being a peer mentor or an ambassador for your college or department. Students may also consider taking leadership courses or completing the OSU Leadership Minor (http://agsci.oregonstate.edu/leadership_minor/).

Medical Experience

Internships, volunteering, or working in health care is important to begin early to gain experience and clarify career choices. See the Medical sections of the list: <http://ib.oregonstate.edu/professional/internship-research/intern-volunteer-list>.

International Medical Internships through the OSU study abroad office are a great way to prepare you for work in a diverse population, improve language and/or cross-cultural communication skills, and gain clinical experience through clinic rotations. See: <http://ib.oregonstate.edu/professional/international>.

Shadowing and other healthcare experience is a good way to get exposure to the field and to decide if medicine is for you. To learn more about healthcare experience, you may view this document: <http://ib.oregonstate.edu/files/ib/Healthcare%20Experience.pdf>.

For details about OSU's Medical Preceptorship program, visit : <http://www.science.oregonstate.edu/node/129>.

Health Care Careers Summer Enrichment Programs - See the following link for a searchable databases of summer programs to learn what it is like to work in a health care or research field: <https://services.aamc.org/summerprograms/> and <https://explorehealthcareers.org/enrichment-programs/> and <http://www.naahp.org/StudentResources/SummerOpportunities.aspx>

Summer Programs for underrepresented students: There are summer programs at medical schools designed to help support rural, disadvantaged and underrepresented minority students to gain entrance to professional school. For example, the Summer Health Professions Education Program at <http://www.shpep.org/>

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.

<http://ib.oregonstate.edu/professional/international>.

Campus Resources

Pre-Med Listserv:

Join the pre-medical listserv to hear about opportunities for pre-med students. To join, send an email using your ONID account to premedclub-join@lists.oregonstate.edu and reply to the email response.

Pre-Med Advising:

Contact your assigned IB advisor or go to <http://ib.oregonstate.edu/advising/appointments>.

Student Clubs:

Pre-Med Society: Society happenings include field trips, speakers, and info on volunteering/community service.

E-mail: premedclub@oregonstate.edu

<https://www.facebook.com/OSU-Pre-Med-Society-548019612055048/>

Investigative Diagnosis: Learn to take accurate and comprehensive patient histories and sharpen diagnostic skills.

Email: diagnosis@oregonstate.edu

<http://www.facebook.com/nvestigativediagnosissocietyatOregonState>

M.A.P.S. (Minority Association for Premedical Students) – Open to any student who supports minority efforts. Email:

oregonstatemaps@gmail.com

OSU Bioethics Society (OSUBS) - A student-led, student-initiated organization that provides both context and space to explore the growing ethical issues brought forth by discoveries in science, technology and medicine. Email:

oregonstateuniversitybioethics@gmail.com

<https://www.facebook.com/groups/885070014850198/>.

Research Opportunities:

Research provides the opportunity to develop analytical and communication skills, an understanding of research methods, and the process of science. For these reasons, it is good preparation for the MCAT and a career in medicine.

<http://ib.oregonstate.edu/professional/research-internships>.