

Biology: Pre-Physician Assistant Option

Bachelor of Science (BS)

Pre-Physician Assistant Option

This option is for students preparing to apply for admission into a physician assistant program. Physician assistants are in demand. The profession is one of the fastest growing in the country due to the shortage of primary care physicians, as well as economic pressures on health care costs. The required and supporting courses are typically required for admission into physician assistant programs.

The Department of Biology has numerous research and teaching labs and many regional field sites that provide excellent opportunities for "hands-on" experiences. We also have good relationships with local health professionals and two regional hospitals, providing numerous opportunities for volunteering, part-time employment, internships, and shadowing. Students may also choose to be involved in student organizations, which allow them to explore their interest in the health profession.

Pre-Physician Assistant students will...

- Meet with their advisor each semester to assess their progress towards admission to a MMS program.
- Take a core of courses that prepares them in any area of biology.
- Take rigorous coursework in anatomy and physiology and molecular genetics which are required for most MMS schools.
- Select additional electives in virology, immunology, pathogenic bacteriology, epidemiology, health physics, and toxicology.
- Complete 80 hours (for 2 credit hours) of experiential learning, usually shadowing doctors and nurses.
- Complete additional coursework in medical terminology, psychology, chemistry, physics, and mathematics to make them competitive for admission to MMS schools.
- Attend classes in the renovated Magill Hall furnished with modern equipment.

Career Planning

Career preparation is part of the mission of Southeast. 100% of programs offer our students an internship, study-abroad program, clinical opportunity, student teaching or research internship.

The Office of Career Services in Academic Hall 057 can provide students with professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities, and more.

Demonstrated Career Proficiency is a Requirement of all Southeast Students		
CL001	First Semester	Students connect academic career planning by completing an online career assessment
CL002	Second Semester	Students learn more about resources available to enhance academic and career planning
CL003	Junior Year	Students learn about continued career planning, job search strategies, and networking
CL004	Senior Year	Students learn about resume development, professional communication, interviewing, and transitioning to the first job from college

Internship Opportunities

- St. Francis Medical Center
- Southeast Missouri Hospital
- Landmark Hospital
- Delta Area Hospital
- Regional physicians, physicians assistants, and nurse practitioners are eager to provide internship opportunities

Professional School Matriculation

- Southern Illinois University-Carbondale
- University of Missouri-Springfield
- University of Kentucky-Lexington
- St. Louis University
- Missouri State University

Physician Assistants complete a Masters of Medical Science (MMS) degree. The application process is very competitive. Many programs require substantial (500-2000 hours) of creditable medical employment. This may be fulfilled as a Certified Nurse Assistant, Emergency Medical Technician, and other allied health fields. Students considering becoming a Physician Assistant should consult the websites of the institutions they plan to attend for requirements and qualifications for admission.

Admission Requirements

A college preparatory sequence that includes three years of science (including biology, chemistry, and physics) and mathematics through advanced algebra is encouraged.

Special Options with Biology

Southeast offers a Master of Natural Science in Biology.

To learn more

Office of Admissions
 (573) 651-2590
admissions@semo.edu
www.semo.edu

To explore the College
 of Science, Technology, and
 Agriculture online, visit
www.semo.edu/costa

For advising

College of Science, Technology, and Agriculture
 Advising Center (573) 651-5930
Costaadvising@semo.edu
www.semo.edu/costa/advising

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This is a guide based on the 2017-2018 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use DegreeWorks to monitor their individual progress.

CURRICULUM CHECKLIST

"Critical Courses" are italicized and bolded. Data shows that students who have completed this course in the first two years and have earned the noted grade are most likely to complete this program of study.

Required Courses:

- ___ BI163 Evolution & Ecology (4)
- ___ BI173 Cell & Organismal Biology (4)
- ___ **BI283 Genetics (4)**
- ___ BI389 Career Development in Biology (1)
- ___ CH185/085/005 General Chemistry (5)

Choose one math course:

- ___ MA134 College Algebra (3)
- ___ MA137 Precalculus (5)
- ___ MA139 Applied Calculus (3)
- ___ MA140 Analytical Geometry & Calculus I (5)

Choose one additional math course:

- ___ MAxxx Additional math (MA133 or higher) (3)

Experiential Learning Requirement: 2 hours

- ___ BI 471-473 Internships in Biology (2)
- ___ BI 551-553 Biology Field Studies (2)
- ___ BI 589-591 Biological Research (2)
- ___ BI 570 Development of Instructional Materials (1)

Pre-Physician Assistant Option Required Courses:

- ___ BS113/013 Anatomy & Physiology I and Lab (4)
- ___ BS114/014 Anatomy & Physiology II and Lab (4)

Biology Electives - choose 12 Hours

- ___ BI/BO/BI/ZO prefix with at least 9 hours at the 300 level (12)
OR
- ___ BS 240 Microorganisms and Their Human Hosts (3)
AND
- ___ BI/BO/BI/ZO prefix with at least 9 hours at the 300 level (9)

Non-Biology Requirements:

- ___ **CH186 Foundations of Inorganic Chemistry (3)**
- ___ CH187 Inorganic Chemistry & Qualitative Analysis Lab (2)
- ___ CH341 Foundations of Organic Chemistry (4)
- ___ HL113 Medical Terminology (3)
- ___ PY220 Psychological Development Across the Lifespan (3)

University Studies Requirements (not already listed above):

UI100 First Year Seminar, EN100 English Composition, Artistic Expression, Written Expression, Oral Expression, Literary Expression, Development of a Major Civilization, Economic Systems, Political Systems, Social Systems

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at semo.edu/transfercredit.

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	BI173	4
	BI163	4	EN100	3
	CH185/085/005	5	CH186	3
	MA134/137/139/140	3-5	CH187	2
			PY220	3
	Total	15-17	Total	15
Milestone: achieve a target cumulative GPA of 3.2				

SECOND YEAR	BI283	4	Biology Elective	3
	PYxxx *	3	Economic Systems	3
	Experiential Learning Crs	2	Literary Expression	3
	Artistic Expression	3	Political Systems	3
	Written Expression	3	Social Systems	3
	Total	15	Total	15
Milestone: achieve a target cumulative GPA of 3.2				

THIRD YEAR	BI389	1	BS114/014	4
	BS113/013	4	CH341	4
	Additional math	3	Biology Elective	3
	Biology Elective	3	Elective	4
	Develop of a Major Civ	3		
Total	14	Total	15	
Milestone: take admission test (if required) & apply through CASPA				

FOURTH YEAR	Biology Elective or BS240	3	HL113	3
	Oral Expression	3	Biology Elective	3
	Elective	3	Elective	3
	Elective	3	Elective	3
	Elective	4	Elective	3
	Total	16	Total	15
Milestone: achieve a target cumulative GPA of 3.2				

A "Milestone" signifies a significant stage for a student in the completion of a degree.

*Recommended for program; consult advisor

Degree requirements for all students: a minimum of 120 credit hours, completion of University Studies program, completion of 39 senior division hours (300-599), career proficiencies (CL001-004), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAPP) at the senior level. Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.

A minimum 2.00 GPA in the major and overall are required to graduate with a BS in Biology degree.

Revised
3/31/2017