

**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.

**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.

**Transfer and Dual Credit Students**

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at [semo.edu/transfercredit](http://semo.edu/transfercredit).

**Bachelor of Science (BS)**

This is a guide based on the 2018-2019 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 Degree Works 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:

- \_\_\_ MA116 Precalculus A (3)
- \_\_\_ MA137 Precalculus (5)
- \_\_\_ MA139 Applied Calculus (3)
- \_\_\_ MA140 Analytical Geometry & Calculus I (5)

## Choose one additional math course:

- \_\_\_ Mxxx Additional math (for which MA116 is a prerequisite) (3)

OR

- \_\_\_ MA155 Statistical Reasoning (3)
- \_\_\_ Experiential Learning Requirement: 2 hours
- \_\_\_ BI 471-473 Internships in Biology (2)
- \_\_\_ BI 551-553 Biology Field Studies (2)
- \_\_\_ BI563-565 Experience in Museum Curation (1-3)
- \_\_\_ BI 570 Development of Instructional Materials (1)
- \_\_\_ BI 589-591 Biological Research (2)

**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/BT/ZO prefix with at least 9 hours at the 300 level (12)
- OR
- \_\_\_ BS 240 Microorganisms and Their Human Hosts (3)
- AND
- \_\_\_ BI/BO/BT/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** – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 3 hours
- Constitution requirement – 3 hours
- US History requirement – 3 hours
- Written Communication – 6 hours
- Oral Communication – 3 hours
- Natural Sciences – 7 hours (from two disciplines, one to include a lab)
- Mathematics – 3 hours
- Humanities & Fine Arts – 9 hours (from at least two disciplines)
- Additional requirements – 5 hours (to include UI100 for native students)

**SAMPLE FOUR-YEAR PLAN**

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
<b>FIRST YEAR</b>	UI100	3	BI173	4
	BI163	4	EN100	3
	CH185/085/005	5	<b>CH186</b>	3
	MA116/137/139/140	3-5	CH187	2
			PY220	3
	<b>Total</b>	<b>15-17</b>	<b>Total</b>	<b>15</b>
Milestone: achieve a target cumulative GPA of 3.2				

<b>SECOND YEAR</b>	<b>BI283</b>	<b>4</b>	Biology Elective	3
	PYxxx *	3	University Studies	3
	Experiential Learning Crs	2	University Studies	3
	University Studies	3	University Studies	3
	University Studies	3	University Studies	3
	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>
Milestone: achieve a target cumulative GPA of 3.2				

<b>THIRD YEAR</b>	BI389	1	BS114/014	4
	BS113/013	4	CH341	4
	Additional math	3	Biology Elective	3
	Biology Elective	3	Elective	4
	University Studies	3		
	<b>Total</b>	<b>14</b>	<b>Total</b>	<b>15</b>
Milestone: take admission test (if required) & apply through CASPA				

<b>FOURTH YEAR</b>	Biology Elective or BS240	3	HL113	3
	University Studies	3	Biology Elective	3
	Elective	3	Elective	3
	Elective	3	Elective	3
	Elective	4	Elective	3
	<b>Total</b>	<b>16</b>	<b>Total</b>	<b>15</b>
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), 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  
7/10/2018