COLLEGE OF SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

Public Health: Biology Option
Bachelor of Science (BS)

The societal need for highly trained and educated public health professionals continues to grow rapidly. According to the US Bureau of Labor Statistics (BLS), nearly one-third of the projected increase in US jobs is projected to come from the healthcare and social assistance sectors.

Public health professionals protect, improve, and promote the health of individuals, communities and populations. They play a significant role in responding to infectious disease epidemics and emergency situations relating to natural disasters. The work of a public health professional can range from addressing the health needs of people in a very specific locality to focusing on the spread of disease across the globe. The work of public health professionals spans many disciplines.

The curriculum for the B.S. in Public Health consists of a core of approximately 83 credit hours, 15 credit hours in a selected option, and 22 additional credit hours of general education and elective credits. The core draws on courses taught by twelve different departments. The option area is intended to allow students to gain an in-depth understanding of a specific area of professional practice. All students complete internships and/or research participation. This interdisciplinary curriculum provides multiple opportunities for graduates in the growing public health field.

Public Health students will...
- Understand the concepts of population health, and the basic processes and interventions that identify and address major health related needs and issues for populations.
- Be able to identify opportunities for promoting and protecting health across the human life span by acquiring an understanding of the science of human health and disease.
- Develop an understanding of the socioeconomic, behavioral, biological, environmental and other factors that impact human health and health disparities.
- Be able to use and analyze public health data and evidenced based approaches in public health practice.
- Be well prepared to directly enter career positions in the public health field or to successfully pursue post-baccalaureate education programs.

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.

Internships, Employment Opportunities, and Graduate Schools of Recent Graduates
- Health Officer
- Project Manager
- Health Research Analyst
- Rural Health Analyst
- Disaster Specialist
- Health Services Consultant
- Humanitarian Organizations
- Program Administrators
- Policy Analysis and Planning
- Community Based Prevention Manager
- Management Analyst
- Quality and Performance Measurement
- Public Health Administrator
- State Departments of Public Health
- Entertainment/Hospitality Companies
- Universities and Colleges
- Community Health Manager
- Local Public Health Agencies
- Federal Emergency Management Agency
- U.S. Food and Drug Administration
- U.S. Department of Agriculture
- Health Plans
- Washington University School of Public Health
- St. Louis University School of Public Health
- University of Missouri – Columbia

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

Transfer and Dual Credit Students
If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at semo.edu/transfercredit.
Public Health: Biology Option

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.

Public Health: Biology Option – 95-97 credit hours

- BI63 Evolution and Ecology (4)
- BI173 Cell and Organismal Biology (4)
- BI310/BS240/BS242 Microbiology (3-4)
- BI434/VE443 Epidemiology (3)
- BI540/EV545 Risk Assessment Applications (3)
- BI471/EV481/HA471/PS384 Internship (1)
- BS113 Anatomy and Physiology I (4)
- BS114 Anatomy and Physiology II (4)
- CH185 General Chemistry (5)
- CH341 Organic and Biological Chemistry (3-4)
- EC215 Microeconomics (3)
- EV 401 Environmental Science Seminar (1)
- HL320 Community Health (3)
- IS175 Information Systems (3)
- MA116 Precalculus A (3)
- MA223/MA150 Probability and Statistics (3)
- PS103 US Political Systems (3)
- PY220 Psychological Development Across the Lifespan (3)
- PY555 Health Psychology (3)
- SC105 Fundamentals of Oral Communication (3)
- SC301 Fundamentals of Health Communications (3)
- SO102 Society, Culture and Social Behavior (3)
- UI309 Professional Writing for Science and Technology (3)
- UI100 Medical Ethics (3)
- UI386 Environmental Health (3)
- UI412 American Healthcare Systems (3)

Biology Option: select 15 credit hours from the following:

- BI233 Genetics (4)
- BI413 Molecular Genetics (3)
- BI441 Virology (3)
- BI442 Immunology (3)
- BI447/VE447 Fundamentals of Disaster/Emergency Management and Planning (3)
- BI448/VE448 Disaster/Emergency Planning and Response (3)
- BI454/VE454 Vulnerability, Risk Reduction & Critical Incident Management (3)
- BI453/VE453 Occupational Health (3)
- BI456/VE456 Fundamentals of Risk Communication in Emergency Management (3)
- BI458 Analytical Bioinformatics (3)
- BI460/VE460 Introduction to Toxicology (3)
- BI434 & 544 Pathogenic Microbiology (3)

University Studies Requirements – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 3 hours
- Constitution requirement – 3 hours
- U.S. 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

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Milestone: maintain 2.0 cumulative GPA

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Milestone: maintain 2.0 cumulative GPA

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Milestone: maintain 2.0 cumulative GPA

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Milestone: maintain 2.0 cumulative GPA

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

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 2.0 GPA in the major and overall are required to graduate with a BS degree.