

APPLIED SCIENCE IN BIOLOGY (DUAL DEGREE) - BS

Biology/Master of Public Health (MPH)

St. Kate's offers the opportunity to apply a liberal arts education in the field of public health through a unique 3+2 dual-degree program in applied science in biology/master of public health (MPH). The dual-degree program allows students to complete their bachelor's degree while pursuing the MPH degree.

As an applied science in biology major, students will complete the biology pre-public health sequence of courses and supporting work for the MPH program. This includes courses in biology, chemistry and statistics, while providing a special emphasis in biology.

The applied science in biology major provides an understanding of the major principles of biology and encourages the development of critical thinking skills. Faculty members encourage students to take an active role in their educational experiences and foster a cooperative, rather than competitive, learning environment. Along with the first-year introductory sequence taken by all pre-MPH students, applied science biology students take the sophomore biology sequence along with our comparative courses which emphasize the "whys" of anatomy and physiology. While preparing students for graduate work in public health, a biology major also prepares them for careers in industry, government and education, and for graduate work in research, medicine, dentistry, and other health professions.

To enroll in this program, students apply to the MPH program during their junior year. If they are admitted to the MPH program, students receive a B.S. in applied science in biology upon completion of the first year of the MPH program. The curriculum for the applied science in biology major is listed in the Pre-Professional Programs, Pre-Public Health (<http://catalog.stkate.edu/undergraduate/preprofessional-programs/prepublic-health/>) section of this catalog.

Biology/Master of Arts in Holistic Health Studies (MAHS)

St. Kate's offers the opportunity to apply a liberal arts education to the growing field of Holistic Health Studies through a unique 3+2 dual-degree program in applied science in biology/Master of Holistic Health Studies (MAHS). The dual-degree program allows students to complete their bachelor's degree while pursuing the MAHS degree. Students graduate in five years with an undergraduate degree in biology and a master's degree in Holistic Health Studies.

The MAHS opens doors of insight into new paradigms of health and healing that integrate mind, body and spirit. This emerging model draws from the best of modern scientific medicine and cross-cultural healing wisdom passed down over centuries. The program offers opportunities for personal empowerment, skill development and spiritual transformation and will prepare students to face today's health and wellness challenges, and lead in the advancement of health and healing.

The applied science in biology major provides an understanding of the major principles of biology and encourages the development of critical thinking skills. Faculty members encourage students to take an active role in their educational experiences and foster a cooperative, rather than competitive, learning environment.

As an applied science in biology major, students will complete the biology pre-Holistic Health Studies sequence of courses and supporting work for the MAHS program. Students will complete the core biology

requirements, two undergraduate Holistic Health Studies courses and can customize their learning by choosing electives that provide a foundation for more advanced study in the Holistic Health Studies program for example, biopsychology, plant biology, evolutionary biology, immunology or other contemporary topics courses.

This unique dual degree in biology and holistic health prepares students for work in health care, education, community activism, non-profits and research.

Biology/Doctor of Physical Therapy (DPT)

St. Kate's offers the opportunity to apply a liberal arts education in the field of physical therapy through a unique 3+3 dual-degree program in applied science in biology/doctor of physical therapy (DPT). The dual-degree program allows students to complete their bachelor's degree while pursuing the DPT degree.

As an applied science in biology major, students will complete the biology pre-physical therapy sequence of courses and supporting work for the DPT program. This includes courses in biology, anatomy, physiology, chemistry, physics, psychology, statistics and mathematics, while providing a special emphasis in biology.

The applied science in biology major provides an understanding of the major principles of biology and encourages the development of critical thinking skills. Faculty members encourage students to take an active role in their educational experiences and foster a cooperative, rather than competitive, learning environment. Along with the first-year introductory sequence taken by all pre-PT students, applied science biology students take the sophomore biology sequence along with our comparative courses which emphasize the "whys" of anatomy and physiology. While preparing students for graduate work in physical therapy, a biology major also prepares them for careers in industry, government and education, and for graduate work in research, medicine, dentistry, and other health professions.

To enroll in this program, students apply to the DPT program during their junior year. If they are admitted to the DPT program, students receive a B.S. in applied science in biology upon completion of the first year of the DPT program. The curriculum for the applied science in biology major is listed in the Pre-Professional Programs, Pre-Physical Therapy (<http://catalog.stkate.edu/undergraduate/preprofessional-programs/prephysical-therapy/>) section of this catalog.

Code	Title	Credits
Fall Term		
BIOL 1710	Foundations of Biology: Diversity and Evolution with Lab	4
CHEM 1110	General Chemistry I with Lab	4
Select one of the following:		
ECON 1090	Statistical Analysis for Decision Making	4
HLTH 1090	Biostatistics	
MATH 1130	Calculus I	
PSYC 1090	Statistical Methods in Psychology	
STAT 1090	Statistical Analysis	
Spring Term		
BIOL 1720	Foundations of Biology: Cell and Molecular Biology with Lab	4
CHEM 1120	General Chemistry II with Lab	4
Fall Term		
BIOL 2720	Sophomore Seminar	2

Spring Term

HLTH 2050	Foundations in Public Health ¹	4
BIOL 2710	Introduction to Ecology with Lab ²	4
or BIOL 2810	Genetics with Lab	

Fall Term

IPE 1030	Healthcare Teams Foundations and Medical Terminology ²	2
or INDI 2220	Medical Terminology	
BIOL 3210	Biology of Microorganisms with Lab	4
BIOL 4860W	Senior Seminar	4

Spring Term

Select two of the following: 8

BIOL 3120	Human and Comparative Vertebrate Anatomy with Lab	
BIOL 3140	Human and Comparative Animal Physiology with Lab	
BIOL 3224	Cell Biology with Lab	
BIOL 3300	Evolutionary Biology with Lab	
BIOL 4220	Immunology with Lab	
BIOL 3260	Developmental Biology	
BIOL 3340	Reproductive Science and Medicine with Lab	

Fall Term

HLTH 6000	Critical Issues in Global Public Health	3
HLTH 6010	Principles of Epidemiology and Biostatistics I	3
HLTH 6030	Design and Implementation of Global Health Programs	3

Spring Term

HLTH 6020	Principles of Epidemiology and Biostatistics II	3
HLTH 6050	Monitoring and Evaluation of Global Health Programs	3
HLTH 6992 & 6992	Topics and Topics	3-4
or HLTH 6040	Global Health Policy and Governance	
HLTH 6100 & HLTH 6992	Ethics and Human Rights for Global Health and Topics	3
or HLTH 6993	Topics	

Total Credits 69-70

¹ May be taken in either Fall or Spring term.

² May be taken in either Fall or Spring term. Note: BIOL 2710 Introduction to Ecology with Lab is offered in Fall and BIOL 2810 Genetics with Lab is offered in Spring.

Code	Title	Credits
Fall Term		
BIOL 1710	Foundations of Biology: Diversity and Evolution with Lab	4
CHEM 1110	General Chemistry I with Lab	4
Select one of the following:		4
ECON 1090	Statistical Analysis for Decision Making	
HLTH 1090	Biostatistics	

MATH 1130	Calculus I	
PSYC 1090	Statistical Methods in Psychology	
STAT 1090	Statistical Analysis	

Spring Term

BIOL 1720	Foundations of Biology: Cell and Molecular Biology with Lab	4
CHEM 1120	General Chemistry II with Lab	4

Fall Term

BIOL 2710	Introduction to Ecology with Lab ¹	4
or BIOL 2810	Genetics with Lab	
BIOL 2720	Sophomore Seminar	2

Spring Term

3000 or 4000-level Biology course 4

Fall Term

BIOL 4860W	Senior Seminar	4
3000 or 4000-level Biology course		4

Fall Term

HHS 6700	Foundations of Holistic Health and Wellness	2
HHS 6720	Complementary/Alternative Approaches to Healthcare	2
HHS 6730	Culture as a Resource in Health and Healing	2
HHS 6760	Ecology and Health	2

Spring Term

HHS 6740	Spiritual Wellness	2
HHS 7520	Women and Holistic Health	2
HHS 8900	Quantitative and Qualitative Research: Mindful Inquiry	3

Select six elective credits from: 6

HHS 6952	Independent Study	
HHS 6982	Topics	
HHS 7800	Mindfulness Based Meditation	
HHS 7830	Energy Healing I	
HHS 7835	Energy Healing II	

Total Credits 59

¹ May be taken in either Fall or Spring term. Note: BIOL 2710 Introduction to Ecology with Lab is offered in Fall and BIOL 2810 Genetics with Lab is offered in Spring.

Code	Title	Credits
Fall Term		
BIOL 1710	Foundations of Biology: Diversity and Evolution with Lab	4
CHEM 1110	General Chemistry I with Lab	4
Select one of the following:		4
ECON 1090	Statistical Analysis for Decision Making	
HLTH 1090	Biostatistics	
MATH 1130	Calculus I	
PSYC 1090	Statistical Methods in Psychology	
STAT 1090	Statistical Analysis	
Spring Term		

BIOL 1720	Foundations of Biology: Cell and Molecular Biology with Lab	4
BIOL 2720	Sophomore Seminar	2
CHEM 1120	General Chemistry II with Lab	4
Fall Term		
PSYC 1000	General Psychology	4
or PSYC 1001	General Psychology with Lab	
PHYS 1080	Physics for the Health Sciences I with Lab	4
or PHYS 1110	Introductory Physics I with Lab	
Spring Term		
BIOL 2810	Genetics with Lab	4
BIOL 3120	Human and Comparative Vertebrate Anatomy with Lab	4
or BIOL 3140	Human and Comparative Animal Physiology with Lab	
PHYS 1080	Physics for the Health Sciences I with Lab	4
or PHYS 1110	Introductory Physics I with Lab	
Fall Term		
BIOL 4860W	Senior Seminar	4
IPE 1030	Healthcare Teams Foundations and Medical Terminology ¹	2
Select one of the following:		4
EXSS 3350	Kinesiology and Biomechanics with Lab	
BIOL course at the 3000 or 4000 level		
Spring Term		
BIOL 3120	Human and Comparative Vertebrate Anatomy with Lab	4
or BIOL 3140	Human and Comparative Animal Physiology with Lab	
PSYC 2025	Lifespan Developmental Psychology	4
or PSYC 3010	Understanding Psychological Disorders	
Fall Term		
DPT 5000	Introduction to Physical Therapist Practice	3
DPT 5010	Outpatient Physical Therapy I	6
DPT 5025	Acute Care I	6
Spring Term		
DPT 5035	Outpatient Physical Therapy II	7
DPT 5040	Rehabilitation I	6
DPT 5055	Transitional Care I	7
Total Credits		95

Students also must complete 60 hours of clinical experience in at least two settings.

¹ May be taken in either Fall or Spring term.