

# BS in Public Health: Epidemiology (662543) MAP Sheet

Life Sciences, Public Health

For students entering the degree program during the 2024-2025 curricular year.



University Core and Graduation Requirements				Suggested Sequence of Courses			
<b>University Core Requirements:</b>							
<b>Requirements</b>	<b>#Classes</b>	<b>Hours</b>	<b>Classes</b>				
<b>Religion Cornerstones</b>							
Teachings and Doctrine of The Book of Mormon	1	2.0	REL A 275				
Jesus Christ and the Everlasting Gospel	1	2.0	REL A 250				
Foundations of the Restoration	1	2.0	REL C 225				
The Eternal Family	1	2.0	REL C 200				
<b>BYU Foundations of Student Success</b>							
BYU Foundations (complete during the first semester)	1	2.0	UNIV 101				
<b>The Individual and Society</b>							
American Heritage	1-2	3-6.0	from approved list				
Global and Cultural Awareness	1	3.0	from approved list				
<b>Skills</b>							
First Year Writing	1	3.0	from approved list				
Advanced Written and Oral Communications	1	3.0	WRTG 315 or 316 recommended				
Quantitative Reasoning	0-1	0-3.0	from approved list				
Languages of Learning (Math or Language)	1	3.0	STAT 121*				
<b>Arts, Letters, and Sciences (complete 6 of 7)</b>							
Civilization 1	1	3.0	from approved list				
Civilization 2	1	3.0	from approved list				
Arts	1	3.0	from approved list				
Letters	1	3.0	from approved list				
Biological Science	1	3-4.0	MMBIO 221*				
Physical Science	1-2	4-7.0	from approved list				
Social Science	1	3.0	from approved list				
<b>Core Enrichment: Electives</b>							
Religion Electives	3-4	6.0	from approved list				
Open Electives	Variable	Variable	personal choice				
*THESE COURSES FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (6 hours overlap)							
<b>Graduation Requirements:</b>							
Minimum residence hours required		30.0					
Minimum hours needed to graduate		120.0					
				<b>FRESHMAN YEAR</b>			
				<u>1st Semester</u>			
				1st Year Writing OR A HTG 100GE	3.0		
				Religion Cornerstone course	2.0		
				HLTH 101	3.0		
				HLTH 210	3.0		
				Arts or Letters GE	3.0		
				UNIV 101	2.0		
				<b>Total Hours</b>	<b>16.0</b>		
				<u>2nd Semester</u>			
				1st Year Writing OR A HTG 100GE	3.0		
				HLTH 312	3.0		
				HLTH 313	3.0		
				Religion Cornerstone course	2.0		
				STAT 121 (Languages of Learning GE)	3.0		
				<b>Total Hours</b>	<b>14.0</b>		
				<b>SOPHOMORE YEAR</b>			
				<u>3rd Semester</u>			
				HLTH 314	3.0		
				HLTH 440	3.0		
				Civilization1 or 2 GE	3.0		
				Social Science GE	3.0		
				General elective	1.0		
				Elective Hours	2.0		
				<b>Total Hours</b>	<b>15.0</b>		
				<u>4th Semester</u>			
				HLTH 315	3.0		
				HLTH 345	3.0		
				Major elective courses	6.0		
				Religion Cornerstone course	2.0		
				Elective Hours	1.0		
				<b>Total Hours</b>	<b>15.0</b>		
				<b>JUNIOR YEAR</b>			
				<u>5th Semester</u>			
				HLTH 316	3.0		
				Major elective courses	6.0		
				Religion elective	2.0		
				Civilization 1 or 2 GE	3.0		
				Elective Hours	1.0		
				<b>Total Hours</b>	<b>15.0</b>		
				<u>6th Semester</u>			
				HLTH 447	3.0		
				Major elective	3.0		
				Applied Learning Experience	3.0		
				Adv. Written & Oral Communication elective	3.0		
				Religion elective	2.0		
				Elective Hours	1.0		
				<b>Total Hours</b>	<b>15.0</b>		
				<b>SENIOR YEAR</b>			
				<u>7th Semester</u>			
				HLTH 449*	3.0		
				Civilization 1 or 2 GE	3.0		
				Religion elective	2.0		
				Arts or Letters GE	3.0		
				Physical Science GE	3.0		
				Elective Hours	1.0		
				<b>Total Hours</b>	<b>15.0</b>		
				<u>8th Semester</u>			
				HLTH 493***	3.0		
				Major elective course	3.0		
				Elective Hours	6.0		
				Biological Science GE	3.0		
				<b>Total Hours</b>	<b>15.0</b>		
				<i>Prior to taking Hlth 493, the student must complete Hlth 210, 313, 314, 315, 345, 440, 447, 449.</i>			
				Please check with departments for current availability of all courses.			
				We encourage students to take HLTH 440 and HLTH 447 as early as possible in the epidemiology emphasis to contribute to research opportunities and/or secure internship opportunities. HLTH 440, 447 and 449 should be taken in sequence; they should not be taken concurrently in the same semester.			
				* Offered FALL only			
				*** Offered WINTER only			
				<b>Note:</b> Students are encouraged to complete an average of 15 credit hours each semester or 30 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate			

## Program Requirements

### Requirement 1 — Complete 12 Courses

*Note: Prior to taking HLTH 493, the student must complete HLTH 210, 313, 314, 315, 345, 440, 447, 449.*

HLTH 210 - Foundations of Public Health 3.0

HLTH 312 - Intro to Plan, Interv, Eval 3.0

HLTH 313 - Intro to Data Coll & Analysis 3.0

HLTH 314 - Hlth, Disease & Determinants 1 3.0

HLTH 315 - Hlth, Disease & Determinants 2 3.0

HLTH 316 - Health Systems and Policy 3.0

HLTH 345 - Principles of Epidemiology 3.0

HLTH 440 - Statistical Computing in Epi 3.0

HLTH 447 - Introduction to Biostatistics 3.0

HLTH 449 - Epi Study Design and Analysis 3.0

HLTH 493 - Epidemiology Capstone 3.0

STAT 121 - Intro to Stat Data Analysis 3.0

Requirement 2 — Complete 1 of 3 Options

Option 2.1 — Complete 3 hours

HLTH 101 - Health and the Human Body 3.0

Option 2.2 — Complete 6 hours

CELL 210 - Human Anatomy (w/ virtual lab) 3.0

MMBIO 221 - General Microbiology 3.0

Option 2.3 — Complete 7 hours

CELL 220 - Human Anatomy (with lab) 4.0

MMBIO 221 - General Microbiology 3.0

Requirement 3 — Complete 3 hours

### *Applied Learning Experience*

HLTH 199R - Global Health Experiences - *You may take up to 3.0 credits 0.5v*

HLTH 481 - Applied International Health - *You may take up to 3.0 credits 1.0v*

HLTH 491R - Mentored Research - *You may take up to 3.0 credits 0.5v*

HLTH 496R - Academic Internship: EH/OH - *You may take up to 3.0 credits 0.5v*

Requirement 4 — Complete 6 hours

HLTH 322 - Environmental Health 3.0

HLTH 324 - Occupational Health & Safety 3.0

HLTH 420 - Injury & Violence Prevention 3.0

HLTH 422 - Disaster Response & Emer Prep 3.0

HLTH 426 - Environmental Toxicology 3.0

HLTH 436 - Sexual and Reproductive Health 3.0

HLTH 450 - Women's Health 3.0

HLTH 456 - Families and Public Health 3.0

HLTH 460 - Substance Use Disorders 3.0

HLTH 461 - Population Mental Health 3.0

HLTH 466 - Hlth & the Aging Process 3.0

HLTH 480 - International Health 3.0

NDFS 201 - Society Nutr Chronic Disease 3.0

NDFS 380 - International Nutrition 3.0

Requirement 5 — Complete 12 hours

BIO 264 - Stat Analysis for Biologists 4.0

HLTH 199R - Global health Experiences - *You may take up to 3.0 credit hours 0.5v*

HLTH 416 - Clinical Data Sys in Pub Hlth 3.0

HLTH 434 - Program Evaluation & Analysis 3.0

HLTH 482 - Medical Geography 3.0

HLTH 492R - Directed Pub Hlth Readings - *You may take up to 3.0 credit hours 1.0v*

MATH 112 - Calculus 1 4.0

MATH 113 - Calculus 2 4.0

MATH 116 - Essentials of Calculus 1.0

MATH 213 - Elementary Linear Algebra 2.0

MATH 215 - Computational Linear Algebra 1.0

SOC 300 - Methods of Research in Soc 3.0

STAT 124 - SAS Base Programming Skills 1.5

STAT 230 - Analysis of Variance 3.0

STAT 234 - Methods of Survey Sampling 3.0

STAT 240 - Probability and Inference 1 3.0

STAT 330 - Introduction to Regression 3.0

Recommended Courses are not required to complete the program

WRTG 315 - Writing in the Social Sciences 3.0

WRTG 316 - Technical Communication 3.0

*Math 112, 113 are recommended for students who want a firm foundation in calculus and/or plan to pursue graduate education.*

## THE DISCIPLINE

Public health professionals work to create conditions that ensure the health and safety of individuals, families, and communities. Public health students are trained to inform, educate, and empower people about health issues; mobilize communities to take ownership for their own health; monitor health status and diagnose and investigate health problems and health hazards; develop policies and laws to protect health and ensure safety; and link people to needed health services. The public health mission is carried out through organized, interdisciplinary efforts that address the physical, mental, and environmental health concerns of communities and populations at risk for disease and injury.

Four of several disciplines within public health are represented as emphases within the major: (1) the environmental/occupational health emphasis trains students to identify and control factors in the environment (air, water, food, toxins, etc.) or conditions at the workplace which affect health; (2) the epidemiology emphasis prepares students to investigate and discover what causes disease and disability and how diseases are spread or distributed across populations; (3) health promotion emphasis students are prepared to facilitate health behavior change among individuals and improves population health through policy, advocacy, education, and communication; and (4) the health science emphasis provides students with a strong public health foundation in the integration of public health with primary care and with other sectors, in cultural competency and health systems, health-related data analysis, and in upstream approaches to health inequities, particularly in vulnerable and diverse populations. Health science students pursue advanced degrees in medicine, dentistry, physician assistantship, or other allied health areas.

Epidemiologists are interested in understanding the distribution and determinants of disease, disability and other health related- events. Epidemiologists may be involved in planning and carrying out investigations or research studies to understand how disease or disability are distributed by person, place, and time factors and to identify genetic, behavioral, social, and environmental factors that either contribute to or prevent disease or disability. Epidemiologic investigations use data from surveys, interviews, and/or examinations to help answer these questions. As such, epidemiologists will spend time preparing and analyzing data to answer questions about disease distribution and determinants and communicating those results verbally and in writing.

## CAREER OPPORTUNITIES

Public health is an exciting field of study and a diverse and dynamic profession. It is filled with rewards associated with the pursuit of serving others. The development and delivery of population-based prevention programs will be the key to major advances in health improvement in the 21st century. Public health will continue to be called upon to monitor and assess health problems, prevent and control diseases and injuries, and protect the health of communities and worksites from various environmental and occupational risks associated with man-made and natural disasters and emergencies.

With the appropriate practice experiences, public health graduates have increased qualifications to work in governmental health agencies on the local and state level. Those wishing to work specifically in epidemiology generally require a master's degree. Likewise, jobs at the federal government and international levels often require work experience and a graduate degree. Private-sector employment can be found in a variety of

businesses, community health agencies, managed care organizations, hospitals, clinics, research institutes, voluntary health agencies, and non-governmental organizations.

Opportunities for employment in public health are available, but recruiters will not typically come to campus to hire graduates. This means graduates must be organized and proactive in their career planning. Students can increase the likelihood of obtaining a position by balancing classroom activities with voluntary or paid service to public health agencies. For epidemiology students, gaining experience with statistical methods and software applications may be particularly beneficial for success in finding entry-level positions.

While there are many specialties or disciplines in public health, most career opportunities are found in the tracks associated with the major. The skills acquired in the epidemiology emphasis can be applied in general public health jobs with widely variable salaries ranging from approximately \$35,000–\$60,00. Compensation will vary significantly depending upon the specific discipline, type of organization, and geographic location. However, entry-level salaries with a master's degree in epidemiology will range from approximately \$45,000–\$70,00 while those with more experience or a doctoral degree may earn more. More specific details about pay and careers in epidemiology can be found at <https://www.bls.gov/ooh/life-physical-and-social-science/epidemiologists.htm#tab-5>.

For more information on careers in your major, please refer to From Major to Career, a publication which is located in all college advisement centers.

## MAP DISCLAIMER

While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

## DEPARTMENT INFORMATION

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