

**COMMUNITY & SOCIAL SERVICES SUBCLUSTER
FOUNDATIONS OF PUBLIC HEALTH
COURSE CODE: 5586**

COURSE DESCRIPTION: This foundational course will provide introductory information for students interested in public health. This course will provide an understanding of the various components that influence personal, community, and population health. Whether that be in a world affected by a pandemic or from a day-to-day perspective in a world without one. The students will be introduced to epidemiology and biostatistics while analyzing the foundational principles of public health education.

COURSE OBJECTIVES & OUTCOME: This introductory course will prepare students for the advanced course as well as help them decide if they have an interest in public health.

PRE-REQUISITE: Health Science 1 or PLTW Principles of Biomedical Science

OPTIONAL ADDITIONAL COURSEWORK: A medical terminology course is encouraged during the public health pathway as a co-requisite.

GENERAL REQUIREMENTS: This course is most appropriate for students in grades 10-12. Students enrolled in this course must have successfully completed the required pre-requisite.

CREDIT: CP Credit =one (1) unit (120 hours) - Honors credit available using the process in the South Carolina Uniform Grading Policy as posted on the SCDE website.

CLASS SIZE: This course is recommended to have a maximum of 24 students in one class.

CONCENTRATOR PATHWAY: Foundations of Public Health and Advanced Principles of Public Health

NOTE: *Please refer to the completer requirements found on the SCDE Health Science web page for the most up to date information.*

THREE UNIT COMPLETER PATH: Health Science 1 *or* PLTW Principles of Biomedical Science, plus Foundations of Public Health, and Advanced Principles of Public Health

FOUR UNIT COMPLETER PATHWAY: Health Science 1 or PLTW Principles of Biomedical Science, plus Foundations of Public Health, Advanced Principals of Public Health, and students choice of: Public Health Research (capstone course), or any other health science course in which they have met the pre-requisites.

STACKABLE CREDENTIALS: Please refer to the new tiered credential system on the SCDE website or refer to the Student Reporting Procedures Guide (SRPG).

STANDARDS

I. INTRODUCTION TO PUBLIC HEALTH

- a. Recognize the contrast between clinical medicine vs public health.
- b. Explain historical and modern perspective.
- c. Identify scope and 10 essential services.
- d. Identify most important public health issues.
- e. Lessons/Learning Activities:
 - o [Introduction to Public Health|Public Health 101 Series](#)
 - o [Clinical Approach vs. Public Health Approach to Health Care](#)
 - o [Outbreak at Watersedge](#)
 - o [Explore Public Health Careers - Public Health](#)
 - o [Unit 1 Upstream Causes](#)

II. DETERMINANTS OF HEALTH BEHAVIOR

- a. Describe 5 Social Determinants of Health: Socioeconomic, political, education, access to healthcare and occupational determinants.
- b. Summarize health disparities.
- c. Identify barriers to communication.
- d. Explain lifestyle factors.
- e. Differentiate environmental indicators.
- f. Research careers (Environmental specialist).
- g. Evaluate ethical concerns (Access to services) (Religious and cultural values).
- h. Apply advocacy and education.
- i. Lessons/Learning Activities:
 - o [Economics, Health, and Health Disparity](#)
 - o [Health Disparities](#)
 - o [Health Advocacy](#)
 - o [Science Ambassador Lesson Plan](#)
 - o [Science Ambassador Lesson Plan](#)
 - o [Environmental Health](#)
 - o [The Effects of Childhood Lead Poisoning](#)
 - o [www.TheLastStraw.ca - Description](#)
 - o [Unnatural Causes: Is Inequality Making Us Sick?](#)
 - o [Health Equity Database](#)
 - [Case Study & Simulation of Marshall Islands](#)
 - [A Case Study of the Pellagra Epidemic](#)
 - [Place Matters: Researching Our Neighborhoods](#)
 - o [Project SHARE Curriculum](#)
 - o [Unit 2 SDOH](#)

III. PUBLIC HEALTH SYSTEMS & WORKFORCE

- a. Identify organizations of health care and public health systems.
- b. Contrast roles and responsibilities.
- c. Recognize insurance /payer systems.
- d. Evaluate ethical concerns (Individual rights vs social responsibility).
- e. Examine health law: Policies, statutes, regulations etc.
- f. Research careers.
- g. Lessons/Learning Activities:
 - o [The Right to Health](#)
 - o [NACCHO Workforce Development and Training](#)
 - o [Healthcare](#)

IV. CHRONIC DISEASE

- a. Observe preventative measures.
- b. Discuss repercussions.
- c. Apply client education.
- d. Summarize policy systems and environmental changes.
- e. Lessons/Learning Activities:
 - o [Index of Educational Activities Organized by Topic | Science Ambassador Fellowship | Career Paths to Public Health](#)
 - o [Facilitator's Guide: Skills for Chronic Disease Management](#)
 - o <https://medicine.wright.edu/sites/medicine.wright.edu/files/page/attachments/hpclass1.pdf>
 - o [Unit 3 Chronic Disease](#)

V. INFECTIOUS DISEASE

- a. Recognize the chain of infection.
- b. Describe the mode of transmission.
- c. Illustrate the epidemiological triangle.
- d. Identify common vehicle (air, food, water, vector).
- e. Differentiate between direct contact vs. indirect contact.
- f. Examine healthcare associated infections (nosocomial).
- g. Explain preventative measures (vaccines).
- h. Evaluate ethical concerns.
- i. Research Careers (Infectious Disease Nurse Practitioner).
- j. Lessons/Learning Activities:
 - o [E. coli O157:H7 Case Study](#)
 - o [RAGE Outbreak: Making Grueling Public Health Decisions](#)
 - o [Spreading Sickness in Middle School](#)
 - o [What's in the Syringe? A Fungal Meningitis Outbreak Investigation](#)
 - o [Introduction to Epidemiology: Chain of Infection](#)
 - o [Unit 2 Infectious Disease](#)

VI. THE PUBLIC HEALTH APPROACH & INTERVENTIONS

- a. Describe the public health approach (Introduction to Epidemiology).
- b. Evaluate epidemiological methods and study design.
- c. Examine rates, risk factors, health status indicators.
- d. Contrast between morbidity and mortality.
- e. Research careers (Epidemiologist).
- f. Lessons/Learning Activities:
 - [Introduction to Epidemiology: Scientific Design](#)
 - [Introduction to Epidemiology](#)
 - [Measures of Risk](#)
 - [Epidemiologists: Disease Detectives](#)
 - [John Snow: Pioneer of Epidemiology](#)
 - [Case Studies in STEM Epidemiology](#)
 - [Ebola Outbreak](#)
 - [Tracking a Virus - Activity](#)
 - [CDC Epidemiology Case Studies](#)
 - [Unit 3 Epi Rates](#)
 - [Teaching Epi](#)

VII. OUTBREAK INVESTIGATION

- a. Recognize types of surveillance.
- b. Interpret epi curves.
- c. Demonstrate contact tracing.
- d. Lessons/Learning Activities:
 - [Public Health Surveillance - Identifying Trends](#)
 - [Public Health Surveillance: Overview](#)
 - [Investigating an Outbreak](#)
 - [Solve the Outbreak Core Curriculum Matrix](#)
 - [Operation Outbreak: Activity 1](#)
 - [Disease Outbreak Investigation](#)
 - [Outbreak! Investigating Epidemics](#)
 - [Unit 4 Outbreak Investigation](#)

VIII. HEALTH COMMUNICATION, DATA AND INFORMATICS

- a. Describe how to access and evaluate quality of health information and data in mass media and internet.
- b. Research careers in health informatics.
- c. Lessons/Learning Activities:
 - [Summarizing Data](#)
 - [Lesson Plan | When Contagion Spreads: Crowdsourcing Disease Outbreaks](#)
 - [Public Health Information Technology Resources](#)
 - [Unit 5 Health promotion](#)

IX. PUBLIC HEALTH PREPAREDNESS AND RESPONSE

- a. Discuss environmental health and injury.
- b. Recognize political and civil upheaval (riots, protest).
- c. Describe interagency coordination.
- d. Demonstrate HeartSaver CPR/ First Aid.
- e. Lessons/Learning Activities:
 - [Environmental Public Health Issues](#)
 - [Dioxin-contaminated Chicken](#)
 - [Public Health Response to Unaccompanied Children Crossing the US Border](#)
 - [Public Health Emergency Preparedness and Response Capabilities: National Standards for State, Local, Tribal, and Territorial Pub](#)
 - [Lesson Plan: Developing Emergency Response Plans](#)
 - [CDC BAM! Body and Mind Classroom Resources for Teachers](#)
 - [FEMA's Be a Hero! Youth Emergency Preparedness Curriculum](#)
 - [Public Health Preparedness Planning](#)
 - [Unit 4 CPR & First Aid](#)
 - [Unit 7 Public Health Preparedness](#)

RESOURCES

[Science Ambassador Fellowship Homepage | Career Paths to Public Health | CDC](#)

<https://www.cdc.gov/careerpaths/k12teacherroadmap/index.html>

[Centers for Disease Control and Prevention \(cdc.gov\)](#)

[Homepage | SCDHEC](#)

[MRC \(hhs.gov\)](#)

[Home of the Office of Disease Prevention and Health Promotion - health.gov](#)

[NCIPH Training Website : Home \(unc.edu\)](#)

[Training and Education | FEMA.gov](#)

White Knoll High School – Center for Public Health

[Public Health and Advanced Medical Studies \(lexdistrict1.com\)](#)