PUBLIC HEALTH CAPSTONE
COURSE CODE: TBD

COURSE DESCRIPTION: The Public Health Capstone course will use epidemiological thinking and the public health approach to explain cause and effect associations that influence health and disease through and end of course, project-based assessment.

COURSE OBJECTIVE: This course will serve as the final course in the public health pathway. The skills and knowledge that students will learn throughout their capstone project development will serve to prepare them to be college or career ready. Objectives taught in this course will include epidemiological research and design, preparation for the workforce, and work-based learning experiences.

GENERAL REQUIREMENTS – This course is designed for students in grade 12.

PRE-REQUISITES: Health Science 1, Principles of Public Health, and Foundations of Public Health.

CREDIT: CP - 1 unit = (120 hours) or 2 units = (240 hours)

RECOMMENDED CLASS SIZE – 24

CONCENTRATOR: Completes two courses:

Principles of Public Health

Foundations of Public Health

COMPLETER: This is the 4th unit in a public health completer pathway.

INDUSTRY ALIGNED CREDENTIALS: 1. BLS Healthcare Providers CPR/AED 2. OSHA Healthcare

STACKABLE CREDENTIALS: 1. Heartsaver CPR/AED 2. First-Aid, FAST, Stop the Bleed, or any others applicable as listed in the Student Reporting Guide.

NOTE*:* *Please refer to the completer requirements found on the SC Health Science website.*

STANDARD 1: EPIDEMIOLOGICAL RESEARCH AND DESIGN

Explore the components of epidemiological research and design.

1. **Determine** what elements of research and design are needed to run a study of your own.
   a. Define & Recognize Study types (experimental or observational, descriptive or analytical)
   b. Define and Recognize Study design (cross-sectional, cohort case control, ecologic, randomized trials)
   c. Identify sampling strategies (double blind, placebo-experimental design, random sampling, quota sampling)
   d. Define screening, validity, reliability
   e. Recognize types of data (quantitative vs. qualitative)
   f. Identify ways to summarize data
   g. Identify confounding variable
   h. Analyze bias (selection bias, informational bias)
   i. Organize and participate in a guided study as a class, with teacher scaffolding
      - Locate useful resources to use in studies

STANDARD 2: PREPARING FOR THE WORKPLACE

Use employability skills to enhance employment opportunities and job satisfaction.

1. **Identify** personal traits and attitudes desirable in a career ready member of a health team.
   a. Acceptance of criticism
   b. Competence
   c. Dependability
   d. Discretion
   e. Empathy
   f. Enthusiasm
   g. Honesty
   h. Initiative
   i. Integrity
   j. Patience
   k. Positive attitude
   l. Responsibility
   m. Self-motivation
   n. Social and cultural competence
   o. Tact
   p. Team player
   q. Willingness to learn

2. **Apply** employability/soft skills in healthcare
   a. Communication skills
   b. Customer service
   c. Decision making
   d. Emotional intelligence
   e. Flexible
   f. Organization

g. Problem solving
h. Scope of practice
i. Time management
j. Work ethic

3. **Summarize and demonstrate** professional standards and characteristics as they apply to employment.
   a. Hygiene and dress: body hygiene, uniform/clothing
   b. Language and behavior: greeting and conversing, behavior appropriate to setting
   c. Legal and Ethical: understand HIPAA, scope of practice
   d. Demonstrate the process and strategies for obtaining and retaining employment
   e. Apply proper technical etiquette in social media, emails, and computer applications
   f. Research levels of education, credentialing requirements and employment trends in the public health sector
   g. Participate in work-based learning experiences through job shadowing, internships and community service projects
   h. Develop and expand components of a personal portfolio

STANDARD 3: EPIDEMIOLOGY IN ACTION

Apply epidemiologic thinking and a public health approach to a model (e.g., outbreak) to explain cause and effect associations that influence health and disease.

1. Students will research and choose a health issue, propose a hypothesis, design and conduct a hypothetical study
   a. Describe how to collect reliable data regarding priority health related phenomena by using public health surveillance systems.
   b. Preparing for all hazards that requires a public health response.
   c. Know your role in public health response.
   b. Use credible evidence to describe a public health surveillance system.
   c. Discuss reliability and validity of survey instrument.
   d. Use models (e.g., mathematical models, and figures) that are based on empirical evidence identify patterns of health and disease to characterize a public health problem.
   e. Use patterns in empirical evidence to create an hypothesis
   f. Use empirical data from an observational study to mathematically quantify an association between an exposure and disease.
   g. Make a statement concerning an association between an exposure and disease with consideration of a mathematical analysis of empirical data.
   h. Evaluate outcomes to create response measures based on data collected.
   i. Oral skills performed on research project. *See resources