
PUBLIC HEALTH

OCAS Code: 8562

Instructor Information (Determined by Instructor)

Instructor	Email	Office Hours & Location
Frist, Last	Email	Info

General information

Grade Level

Comprehensive High School, 9-12

Credit

1 semester, 120 hours, 1 credit

Teacher Certification Necessary

Any certification area

Student Certificate

Course Description

This foundational course will provide introductory information for students interested in public health careers. This course will provide an understanding of the various components that influence personal, community, and population health in our world. The students will be introduced to epidemiology and biostatistics while analyzing foundational principles of public health education.



OKLAHOMA
CareerTech

HCE Health Careers Education

Expectations and Goals

1. **Introduction to Public Health Concepts:** Students will gain an understanding of the broad scope of public health, including its definition, goals, and historical significance.
2. **Exploration of Determinants of Health:** Students will learn about the various factors that influence health outcomes at the individual, community, and population levels. This includes social, economic, environmental, and behavioral determinants.
3. **Basic Epidemiology and Biostatistics:** Introduce students to the fundamental concepts of epidemiology and biostatistics, including the study of disease patterns, risk factors, and data analysis techniques used in public health research.
4. **Health Promotion and Disease Prevention:** Provide an overview of strategies and interventions aimed at promoting health and preventing disease at different levels, from individual behavior change to community-wide initiatives.
5. **Understanding Health Disparities:** Explore the social, economic, and environmental factors contributing to health disparities and inequities within populations, with a focus on vulnerable and marginalized groups.
6. **Global Health Issues:** Examine global health challenges and the interconnectedness of health issues across borders, including infectious diseases, environmental health threats, and the impact of globalization on health.
7. **Public Health Policy and Advocacy:** Introduce students to the role of public health policy in shaping health outcomes and promoting equity, and empower them to advocate for evidence-based policies that promote health and well-being.
8. **Critical Thinking and Problem-Solving Skills:** Develop students' critical thinking skills by analyzing public health data, evaluating health interventions, and proposing solutions to real-world public health challenges.
9. **Ethical Considerations in Public Health:** Discuss ethical principles and dilemmas in public health practice, including issues related to privacy, autonomy, justice, and the balance between individual rights and the common good.
10. **Career Exploration:** Provide students with insights into various career paths within the field of public health, including epidemiology, health education, environmental health, policy analysis, and community health promotion.
11. **Hands-on Learning Opportunities:** Incorporate experiential learning activities, such as case studies, simulations, guest speakers, and field trips to public health agencies or community organizations, to deepen students' understanding of real-world public health practice.

Course Syllabi

Standard 1: Employability Skills

Demonstrate employability skills required by business and industry.

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities
2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.
3. Exhibit critical thinking and problem-solving skills to locate, analyze and apply information in career planning and employment situations.



OKLAHOMA
CareerTech

HCE Health Careers Education

4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.
5. Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply teamwork skills.
6. Present a professional image through appearance, behavior, and language.

Foundation Standard 2

Describe the context and scope of public health on improving health and quality of life in personal, community (including local, state, and federal health department), and the global population based on the ten essentials of public health.

Identify patterns in the written text about the history, philosophy, and services provided by public health.

Identify the 10 essential services of public health:

- Monitor health status to identify and solve community health problems.
- Diagnose and investigate health problems and health hazards in the community.
- Inform, educate, and empower people about health issues.
- Mobilize community partnerships and action to identify and solve health problems.
- Develop policies and plans that support individual and community health efforts.
- Enforce laws and regulations that protect health and ensure safety.
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
- Assure competent public and personal health care workforce.
- Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
- Research for new insights and innovative solutions to health problems.

3. Define the core functions of public health and how they relate to the ten essential services of public health (assessment, policy development, and assurance).
4. Explain the career pathways as they related to the essential services provided by public health.
5. Define the ethical obligations required of a public health practitioner versus the community as a whole.
6. Outline the phases of community mobilization as they relate to public health communication (planning, awareness, taking action, and monitoring and evaluating).



7. Analyze the levels of collaboration (networking, cooperation, coordination and collaboration) required for effective communication of information about personal risk behaviors and primary prevention of common public health concerns.
8. Define the broad spectrum of enforcement activities in areas of public health concern, including, but not limited to the protection of drinking water; enforcement of clean air standards; regulation of care provided in health care facilities and programs; reinspection of workplaces following safety violations; review of new drug, biologic, and medical device applications; enforcement of laws governing the sale of alcohol and tobacco to minors; seat belt and child safety seat usage; and childhood immunizations.
9. Explain how public health can utilize health information and health communications to improve the health of populations.
10. Connect the relationship that economics has with the implementation of public health practices and strategies.

Foundation Standard 3

Explain how epidemiology is the basic science of public health and describe how it is used to study, prevent, and control disease.

1. Summarize the major objectives of epidemiologic methods.
2. Discuss the classification of notifiable diseases and the basic steps of an epidemiological investigation.
3. Describe the application of epidemiology in the study of chronic diseases
4. Differentiate between the uses of the following terms in defining disease: prevalence rates, incidence rates, death rates, disease distribution, and epidemic curves.
5. Differentiate between the following epidemiologic studies: intervention studies, cohort studies, and case control studies.
6. Analyze sources of potential errors in epidemiologic study.
7. Discuss basic ethical and legal principles pertaining to the collection, maintenance and use and reporting of epidemiologic data.
8. Apply basic knowledge of statistics to identify the p-value, statistical significance, and confidence intervals related to an epidemiologic study.
9. Evaluate the role of data in public health and the strengths and limitations of epidemiologic reports.
10. Analyze current studies in Georgia and the methodology being utilized in those studies.

Foundation Standard 4

Differentiate the means of transmission as they relate to the biomedical basis of disease for infectious, chronic, and genetic diseases.

1. Define common infectious agents associated with public health.
2. Construct the chain of infection using the following concepts: pathogen, reservoir, place of exit, method of transmission, port of entry, and susceptible host.
3. Develop a logical argument for the benefit of vaccination and compare these arguments to those related to fear of vaccination.
4. Investigate the role vaccination has with the prevention of diseases such as rabies, smallpox, measles, and polio.
5. Identify patterns of the emergence and resurgence of various infectious diseases (e.g. AIDS, HIV, West Nile Virus, Influenza, MRSA, and TB).
6. Analyze the public health response to emerging infections.
7. Identify common chronic diseases (e.g. cardiovascular diseases, cancer, diabetes, arthritis, and Alzheimer's disease).
8. Analyze the role that public health professionals play with the reduction of risk and prevention of common chronic diseases.
9. Define terminology associated with genetic diseases.
10. Investigate the relationship that patterns of inheritance have with the development of disease.
11. Critique the potential ethical issues related to genetics and genomics with the prevention and training of genetically associated diseases.

Foundation Standard 5

Identify how psychosocial factors affect health behavior.

- Explain the relationship of demographic factors on an individual's health status.
- Evaluate the effects of socioeconomic status (SES) on the health of population groups.
- Investigate current health behavior theories and the role in the development of health intervention and promotion programs.
- Investigate current health behavior theories and the role in the development of health intervention and promotion programs).
- Assess, interpret, and evaluate public health data using information technology.

- Analyze evidence-based practices applied to social and behavioral public health interventions.
- Research the concept of social determinants of public health

Foundation Standard 6

Discuss the significance that obesity, substance abuse (including tobacco usage), and mental health disorders have with relation to the development of illness.

- Identify and discuss the major diseases caused by smoking and the estimated number of annual deaths.
- Define the biomedical basis for smoking's harmful effects of the body.
- Critically analyze the relationships between advertising of tobacco products, historical trends in smoking, and regulatory restriction on smoking.
- Investigate the epidemiological research that supports the link between obesity and the development of disease.
- Define the diseases commonly associated with obesity.
- Summarize the role that healthy eating, physical activity, and healthy minds have with confronting the obesity epidemic.
- Define the most commonly diagnosed mental health illnesses.
- Connect the epidemiologic evidence linking mental health illnesses with substance abuse, injuries, and illnesses.
- Differentiate between the treatment of mental health illness in childhood, adults, and older adults.
- Summarize the common causes and prevention of mental health illness.
- Assess the various methods of treatment for mental health illness.
- Research programs and initiative available through the Oklahoma Department of Health

Foundation Standard 7

Investigate the reasons child and maternal health is a high priority in public health.

- Cite several studies depicting improvement in child and maternal health through United States and world history.
- Analyze infant mortality rates (IMR) in different countries and among different races.
- Cite evidence supporting infant mortality as either a social or a health problem.



- Summarize programs developed to decrease the IMR including those targeting congenital malformations, preterm birth, and sudden infant death syndrome.
- Discuss family planning and prevention of adolescent pregnancy related to abstinence and comprehensive sex education in schools.
- Analyze the development of nutritional programs for women and children.
- Critique the effectiveness of immunization programs in the prevention of infectious diseases.
- Evaluate results of the ongoing National Children's Study.
- Investigate and analyze data regarding women and children's health and Independent Medical Researcher (IMR) in local community and state.

Foundation Standard 8

Assess that injuries are not accidents, are a major public health issue, and dependent on people's behavior and environment.

- Research the laws and regulations designed to protect health and safety at the local, state, and federal public health level.
- Analyze the relationship of epidemiology and accident prevention considering the host, agent, and environment, primary, secondary, and tertiary prevention.
- Cite evidence of government and public campaigns effective in decreasing motor vehicle injuries.
- Investigate current issues of poisoning including fatalities related to prescription drugs.
- Critique data collected and studies conducted on firearm injuries and deaths in the United States.
- Analyze data related to leading causes of childhood accidents and prevention programs.
- Investigate current issues surrounding student athletes' safety including concussion and traumatic brain injury prevention (TBI) and sudden cardiac death.
- Investigate domestic violence including child abuse and domestic partner violence for risk factors and prevention programs.
- Define agencies responsible for en --- NOT SURE WHY THIS IS CUT OFF

Foundation Standard 9

Summarize the relationship between role of environmental and occupational health with the prevention of injury and illnesses.

- Identify and describe the role that the government has with the establishment of environmental health.
- Define the governmental agencies responsible for the various environmental public health concerns at the local, state, and federal level.
- Critically analyze the relationship between the use of pesticides and industrial chemicals in the environment and the impact on both humans and the ecological system.
- Investigate the scope of occupational injuries, illnesses, and fatalities since the 19th century.
- Identify the governmental agencies responsible for the development and enforcement of occupational safety and health regulations.
- Identify the governmental agencies responsible for conducting research related to occupational health injuries and illness prevention.
- Classify patterns in the regulatory process for both environmental and occupational standards.
- Critically analyze the process of risk-benefit analysis.

Foundation Standard 10

Enforcement of public health policy at the local, state, and federal level. Investigate the relationship between medical care and public health.

- Investigate the concept of medical care as a public health issue.
- Differentiate between patient diagnosis (individual medical care) versus community diagnosis (public health).
- Cite evidence supporting the responsibility of public health regarding specific areas of medical care including communicable diseases, emergency services, veterans, and prisoners
- Assess the conflict between public health and the medical profession including insurance, indigent care, and school children.
- Discuss and critique the major trends in government health insurance programs and laws including The Patient Protection and Affordable Care Act of 2010.



- Identify the criteria for evaluating health systems including issues of access, quality, and cost.
- Investigate the governmental licensing and regulation system of health care professionals.
- Describe the fundamental concepts and features of project implementation, including planning, assessment and evaluation and determine methods used to evaluate the effectiveness, accessibility and quality of personal and population-based health services.
- Investigate prominent ethical and legal issues in medical care.

Foundation Standard 11

Describe the fundamental concepts and applications of health services research as they intersect public health practice with medical care, institutions of higher learning, and governmental agencies at the local, state, and federal level.

- Connect public health research with institutions of higher learning and critique this role.
- Identify the institutions of higher learning and agencies at the local, state, and federal level that are responsible for initiating research, participating in research by others, reporting results, and implementing policy based on these results.
- Analyze the broad spectrum of public health research that spans from practical field-based efforts to foster change in public health practice, to more academic efforts to encourage new directions in scientific research.
- Define the scientific methods and terminology used in public health to conduct research, including, but not limited to: epidemiology, statistical analyses, behavioral health, environmental health, occupational health, global health, and public health policy.
- Design a grant application to synthesize the process of developing a public health research project.
- Analyze public health research publications for information establishing innovative solutions to public health problems.
- Summarize how public health research is critical for each of the nine other essential areas of public health.

- Critique the internal capacity of local, state, and federal agencies to mount timely epidemiological and health policy analyses and conduct health systems research.
- Discuss the ethical issues in research.

Foundation Standard 12

- Research the health needs of the elderly population and how changing trends, medical costs, and existing programs can result in a positive health outcome.
- Analyze trends in the aging of the population.
- Identify and research general approaches to maximizing health in the elderly population.
- Evaluate and investigate the effectiveness of programs targeting the following identified health risks of the elderly populations: medications, osteoporosis, falls, vision and hearing impairment, oral health, and Alzheimer's and other dementias.
- Analyze medical costs of the elderly population and discuss current and future payment strategies

Foundation Standard 13

Describe the role that public health has with emergency preparedness planning.

- Define commonly used terminology associated with emergency preparedness planning.
- Investigate the relationship that public health organizations at the local, state, and federal level with the establishment of an Incident Command System during a disaster response.
- Identify the different types of disasters (man-made, natural, biological, and technological.)
- Investigate recent disasters and analyze the public health responses and how they may have prevented potential spread of disease.
- Summarize the role that the Federal Emergency Management Agency (FEMA) and the National Guard have for emergency response, preparedness, and planning purposes.
- Define the key principles of emergency planning and preparedness (e.g. sharing of information, resource management, warnings of evacuations, warnings must be consistent, coordination of search and rescue efforts, involvement of mass media, triage, casualty distribution, tracking of patients and survivors, establishment of care of patients, management of volunteers and donations, and unanticipated problems).

Course Materials (Determined by Instructor)

Required materials

Need a heading or a bullet? On the Home tab, in the Styles gallery, choose from all styles used in this syllabus.

- Tap to add text.
- Tap to add text.

Optional materials

Want to add more tables to your document that look like the Course Schedule and Exam Schedule tables that follow? Nothing could be easier. On the Insert tab, just select Table to add a new table. New tables you create in this template are automatically formatted to match.

Required text

Item name 1 Media Type, Author Name

Item name 2 Media Type, Author Name

Course Schedule (Determined by Instructor)

Week	Topic	Reading	Exercises
Week 1	Enter topic	Enter reference	Enter exercise
Week 2	Enter topic	Enter reference	Enter exercise
Week 3	Enter topic	Enter reference	Enter exercise

Exam Schedule (Determined by Instructor)

Date	Subject
Date 1	Enter subject
Date 2	Enter subject
Date 3	Enter subject



Additional Information and Resources

Resources

CDC: Epidemiology Resources and Training: <https://www.cdc.gov/eis/request-services/epiresources.html>

Centers for Disease Control: CDC Centers and Institute

- [Center for Forecasting and Outbreak Analytics \(CFA\)](#)
- [Global Health Center \(GHC\)](#)
- [National Center on Birth Defects and Developmental Disabilities \(NCBDDD\)](#)
- [National Center for Chronic Disease Prevention and Health Promotion \(NCCDPHP\)](#)
- [National Center for Emerging and Zoonotic Infectious Diseases \(NCEZID\)](#)
- [National Center for Environmental Health \(NCEH\)/ Agency for Toxic Substances and Disease Registry \(ATSDR\)](#)
- [National Center for Health Statistics \(NCHS\)](#)
- [National Center for HIV, Viral Hepatitis, STD, and TB Prevention \(NCHHSTP\)](#)
- [National Center for Immunization and Respiratory Diseases \(NCIRD\)](#)
- [National Center for Injury Prevention and Control \(NCIPC\)](#)
- [National Center for State, Tribal, Local, and Territorial Public Health Infrastructure and Workforce \(NCSTLPHIW\)](#)
- [National Institute for Occupational Safety and Health \(NIOSH\)](#)

American Public Health Association, <https://www.apha.org/>

Oklahoma Department of Health, Community Health Worker Core Trainings: <https://oklahoma.gov/health/health-education/community-outreach/community-development-services/community-health-worker.html>

Oklahoma Public Health Training Center Trainings for Community Health Workers in Oklahoma: <https://ophtc.ouhsc.edu/Training/chw>

Oklahoma Public Health Training Center—Webinars: <https://ophtc.ouhsc.edu/webinars>

National Institutes of Health Article: [Public Health Education: Teaching Epidemiology in High School Classrooms - PMC \(nih.gov\)](#)

Public Health 101 [Public Health 101 Series | CDC](#)

