

SYLLABUS

Health Science: Public Health

What is public health? Who is in control of our health systems and who decides which diseases get funding and which do not? What are the human and environmental reasons for health inequality? Health Science: Public Health answers all of these questions and more. You will study both infectious and non-communicable diseases as well as learn how we conquer these on a community and global level through various methods, including proper hygiene, sanitation, and nutrition. Explore the role current and future

technologies play worldwide as well as consider the ethics and governance of health on a global scale. Discover unique career opportunities, and fascinating real-life situations.



Field Experience Project (Optional)

Some states require field experience, and this course includes a field experience project. Check with your school's administrator about how to complete this project. Recommended materials for the field experience appear below. Schools are responsible for overseeing and assessing this experience.

- Transportation to and from field experience
- Proper attire for chosen field experience
- Notebook or clipboard with loose-leaf paper
- Audio recording app (optional)
- Landline or cell phone to make phone calls

Unit 1: What is Global Health?

Global Health: Those two words are large enough on their own, but together, they create a wide, almost-impossible scope for a healthcare worker. How can one person ever hope to care for the entire world? Fortunately, it isn't up to individuals working alone; this task requires that national and regional healthcare systems work together for the improvement of everyone's health. It's easy enough now for people to pack up and travel across the planet; and diseases do the same

thing. Only through coordination and cooperation can we hope to offer quality healthcare to everyone.

What will you learn in this unit?

- Describe an epidemiologist's contributions to public health
- Assess the world's health through data analysis
- Explain how the Sustainable Development Goals and global health are related
- Analyze a country's response to a disease outbreak and determine if their health system is sustainable

UNIT 1 Assignments

Assignment	Type
Unit 1 Text Questions	Homework
Unit 1 Lab	Homework
Unit 1 Activity	Activity
Unit 1 Discussion 1	Discussion
Unit 1 Discussion 2	Discussion
Unit 1 Quiz	Quiz

Unit 2: Why So Unequal?

Different countries and regions have different burdens of disease, and even within the same country or neighborhood, the health of individual people varies widely. Why are there such great variances in personal health? What causes them? While some of these differences are influenced by biological distinctions, many are a byproduct of sociological systems humans have created. To understand why health, access to healthcare, and motivation for treatment varies across the globe, we have to look more closely at the systems that are creating these differences.

What will you learn in this unit?

- Explain how inequities arise when groups move from norms into institutionalized systems
- Analyze historical global healthcare models against the institutionalization of racism
- Describe how the social determinants of healthcare have as great an impact on personal health as biological determinants
- Give examples of inequity in the U.S. healthcare system

UNIT 2 Assignments

Assignment	Type
Unit 2 Text Questions	Homework
Unit 2 Lab	Homework
Unit 2 Activity	Activity
Unit 2 Discussion 1	Discussion
Unit 2 Discussion 2	Discussion
Unit 2 Quiz	Quiz

Unit 3: Who's in Charge?

Once countries accept that they are responsible for providing healthcare to their residents, they have to decide how they will provide it and who will pay for it. Healthcare systems are the result of these decisions, and they vary greatly from country to country. Everyone wants access to quality healthcare without great risk to their savings account, but some health-system models are friendlier to the pocketbook than others. Comparing the different systems of countries gives a clear view of national priorities and helps us to appreciate their concerns.

What will you learn in this unit?

- List the actors in a healthcare system and describe their roles
- Describe the four healthcare system models, giving the advantages and priorities of each
- Analyze how differing priorities around the principles of healthcare systems can result in inequity

- Understand how the United States healthcare system compares to other countries

UNIT 3 Assignments

Assignment	Type
Unit 3 Text Questions	Homework
Unit 3 Lab	Homework
Unit 3 Activity	Activity
Unit 3 Discussion 1	Discussion
Unit 3 Discussion 2	Discussion
Unit 3 Quiz	Quiz

Unit 4: Location, Location, Location

Where you are matters to your health. Your location on this planet—from the country you live in, down to the nitty-gritty of what part of your city you live in, to where you go to work or school, and how you travel to get there—all impact your health to a degree. While biological and social factors have stronger, more immediate, impacts on a person’s health, we can’t leave out an environmental analysis because, like it or not, we are one with our environment, in sickness and in health.

What will you learn in this unit?

- Give examples of environmental health concerns at the household, workplace, community/regional, and global levels
- Describe how environmental health concerns are magnified as you move up the scale from the household level to the global level
- Analyze your immediate environment for environmental health concerns
- Offer steps someone could take to protect themselves from common household or workplace environmental concerns

UNIT 4 Assignments

Assignment	Type
Unit 4 Text Questions	Homework
Unit 4 Lab	Homework
Unit 4 Activity	Activity
Unit 4 Discussion 1	Discussion
Unit 4 Discussion 2	Discussion
Unit 4 Quiz	Quiz

Unit 5: The Big Killers: Infectious Diseases

Infectious diseases really play the bad guys in the global health scenario. They are caused by pathogens invading our space and making us sick. This means that they are completely avoidable, if we could only isolate ourselves from all possible infectious materials and organisms. The problem is that we are social people; we interact. And as we interact, we exchange all kinds of things, from the visible to the invisible. One would hope that if we could just put some really good laws and public service announcements in place, we could rid the world of infectious disease. Too bad global health isn't as easy as that.

What will you learn in this unit?

- Define and use epidemiological terms related to disease transmission
- Describe the different ways malaria, HIV/AIDS, and tuberculosis are transmitted
- Analyze the efficacy of various control methods used for infectious diseases
- Explain the challenges related to global eradication of malaria, HIV/AIDS, and tuberculosis

UNIT 5 Assignments

Assignment	Type
Unit 5 Text Questions	Homework
Unit 5 Lab	Homework
Unit 5 Activity	Activity
Unit 5 Discussion 1	Discussion
Unit 5 Discussion 2	Discussion
Unit 5 Quiz	Quiz

Unit 6: The Big Killers: Noncommunicable Diseases

There is a whole other category of diseases that are not passed from person to person.

Noncommunicable diseases, such as heart disease, cancer, and diabetes, are often the delayed result of a number of preventable lifestyle choices. Though they used to be slow-moving and would show up in late adulthood, noncommunicable diseases are taking over as the major causes of death worldwide and are affecting younger and younger people. To understand these trends, we have to look at how economic forces and other motivating factors have become obstacles to healthy, lower-risk lifestyles.

What will you learn in this unit?

- Explain how noncommunicable diseases differ from infectious diseases in the way someone contracts the disease, and in their control and prevention options
- Describe how noncommunicable diseases are the result of personal lifestyle choices that are influenced by a number of societal factors
- List the steps for first-aid treatment for heart attacks, seizures, diabetic reactions, and stroke
- Reason why mental health must be given the same status as physical health in a patient's prevention and treatment plan

UNIT 6 Assignments

Assignment	Type
Unit 6 Text Questions	Homework
Unit 6 Lab	Homework
Unit 6 Activity	Activity
Unit 6 Discussion 1	Discussion
Unit 6 Discussion 2	Discussion
Unit 6 Quiz	Quiz

Health Science Public Health Midterm Exam

- Review information acquired and mastered from this course up to this point.
- Take a course exam based on material from the first six units in this course. (Note: You will be able to open this exam only one time.)

MIDTERM Assignments

Assignment	Type
Midterm Exam	Exam
Midterm Discussion	Discussion

Unit 7: Fight Back: WASH

Are you itching to see what is being done about all these global health problems? A huge focus in global health is on providing universal access to clean water and safe sanitation. Through a combination of education, behavior modification, and infrastructure creation projects, households and communities experience a significant drop in infectious disease incidence. And when people

are less sick, they have more energy to improve their lives, which is an all-around win for households and societies in general.

What will you learn in this unit?

- Describe the challenges associated with changing people’s behavior
- Analyze the success of WASH projects in different countries
- Explain how WASH projects scale up from the household to the global level
- Suggest a water or sanitation project that would work best in a community, given the environmental and cultural context

UNIT 7 Assignments

Assignment	Type
Unit 7 Text Questions	Homework
Unit 7 Lab	Homework
Unit 7 Activity	Activity
Unit 7 Discussion 1	Discussion
Unit 7 Discussion 2	Discussion
Unit 7 Quiz	Quiz

Unit 8: Fight Back: Nutrition

No matter whether you live in a place with no farm stands nearby or right next to a giant supermarket, a primary human concern is finding something to eat. Worldwide, people are struggling with eating well. Some people cannot get access to foods that provide enough energy and nutrients to keep them strong and healthy, so they lose what little reserves their bodies have. Other people have plenty of food options and select foods that do not supply the right kind of energy and nutrients, so instead of gaining muscle and strength, they gain fat. Proper eating

habits directly contribute to personal health; therefore, food quality, food access, and food systems are important considerations in global healthcare.

What will you learn in this unit?

- Explain the different categories and signs of malnutrition
- Differentiate between macronutrients and micronutrients, giving examples of the roles they play in physical health
- Give examples of how looking at food production from a food systems perspective puts an emphasis on sustainability
- Describe how a conflict or other emergency situation creates health challenges

UNIT 8 Assignments

Assignment	Type
Unit 8 Text Questions	Homework
Unit 8 Lab	Homework
Unit 8 Activity	Activity
Unit 8 Discussion 1	Discussion
Unit 8 Discussion 2	Discussion
Unit 8 Quiz	Quiz

Unit 9: Fight Back: Maternal and Child Health

Women's bodies can do amazing things. They can become a home for a fetus to develop within during pregnancy. Afterward, like other mammals, women's milk becomes a food source for their young. Each step of an infant's developmental process up until they are weaned off breastmilk is directly influenced by the health of the mother. Even after weaning, young children are utterly dependent on their caretakers to ensure that they have the things they need to be healthy and strong. From a global health perspective, taking care of mothers and children at this vulnerable

time of pregnancy and early childhood helps to ensure the overall survival and flourishing of humans.

What will you learn in this unit?

- Summarize how women’s empowerment affects global health
- Give examples of specific moments in a woman’s life where her empowerment will lead to better health outcomes for herself and her family
- Describe several national food-fortification efforts, including their challenges and their outcomes
- Explain why cultural sensitivity is a key skill for a healthcare worker

UNIT 9 Assignments

Assignment	Type
Unit 9 Text Questions	Homework
Unit 9 Lab 1	Homework
Unit 9 Lab 2	Homework
Unit 9 Activity	Activity
Unit 9 Discussion 1	Discussion
Unit 9 Discussion 2	Discussion
Unit 9 Quiz	Quiz

Unit 10: Global Health Innovation

Whether you’re a chef, a mechanic, an Olympic athlete, or a pilot, having the proper tools makes your work a whole lot easier, not to mention safer. And better tools definitely yield better results. Healthcare is no different. Healthcare professionals need proper devices to diagnose and treat their patients, not to mention research better methods of performing their services. Limit a

healthcare professional's tools, and you lose lives. Technology can do a lot for improving global health.

What will you learn in this unit?

- Identify the uses for imaging devices common to high-income countries' radiology departments
- List and define the five categories of global healthcare innovation
- Give an example of an innovation for each of the five categories
- Assess a global healthcare project to see if it is well rounded and culturally appropriate

UNIT 10 Assignments

Assignment	Type
Unit 10 Text Questions	Homework
Unit 10 Lab	Homework
Unit 10 Activity	Activity
Unit 10 Discussion 1	Discussion
Unit 10 Discussion 2	Discussion
Unit 10 Quiz	Quiz

Unit 11: Trial and Error: Clinical Trials and Ethics

As a medical researcher and innovator, you create clinical trials to test your ideas. These studies might lead to new drugs, devices, or other therapeutics that improve people's lives. That's the positive side of research. But before a drug makes it onto the market, a lot of decisions are made about what disease to focus on and how to create and test the drug. These decisions are part of clinical trial planning and must follow certain guidelines to make sure everyone is being treated fairly and with respect.

What will you learn in this unit?

- Give examples of quantitative research methods and their benefits
- Describe which moral framework related to healthcare is the most similar to your own
- Explain why ethics must be a part of healthcare and research studies
- Judge whether a clinical trial was performed ethically or not

UNIT 11 Assignments

Assignment	Type
Unit 11 Text Questions	Homework
Unit 11 Lab	Homework
Unit 11 Activity	Activity
Unit 11 Discussion 1	Discussion
Unit 11 Discussion 2	Discussion
Unit 11 Quiz	Quiz

Unit 12: Reaching Global Health

You've got the keys to the castle now! With the Sustainable Development Goals in your pocket, and all the case studies you've read from around the world, not to mention the developing list of careers contributing to different aspects of healthcare and the analytical framework to use when looking at health-related interventions, you've got all that you need to take the next step and become a global-health worker.

What will you learn in this unit?

- Give examples of content you've learned in this course that demonstrate each of the core competencies for global health
- Summarize what different healthcare professions contribute to global health and the SDGs
- Identify health-related volunteer programs or fellowship opportunities that interest you
- Explain the personal steps you can take to be healthy

UNIT 12 Assignments

Assignment	Type
Unit 12 Text Questions	Homework
Unit 12 Lab	Homework
Unit 12 Activity	Activity
Unit 12 Discussion 1	Discussion
Unit 12 Discussion 2	Discussion
Unit 12 Quiz	Quiz

Health Science Public Health Final Exam

- Review information acquired and mastered from this course up to this point.
- Take a course exam based on material from units seven to twelve in this course – the last six units.
(Note: You will be able to open this exam only one time.)

FINAL Assignments

Assignment	Type
Final Exam	Exam
Class Reflection Discussion	Discussion