



South Central College

BIOL 120 Health and the Environment

Common Course Outline

Course Information

Description	This course explores the interrelationships between people and the environment, and how these relationships affect human health. The ecological model of health is emphasized when assessing risk factors for common health issues, including lifestyle choices, genetics, and environmental exposure. The course also investigates how complex environmental problems like climate change, biodiversity loss, and pollution influence health, and examines strategies to reduce their negative impact. (Prerequisites: none) (MnTC Goal Area 10: People and the Environment)
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Total Credits	3
Total Hours	48

Types of Instruction

Instruction Type	Credits/Hours
Lecture	3/48

Institutional Core Competencies

Civic Engagement and Social Responsibility - Students will be able to demonstrate the ability to engage in the social responsibilities expected of a community member.

Communication - Students will be able to demonstrate appropriate and effective interactions with others to achieve their personal, academic, and professional objectives.

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Cultural Competence - Students will be able to demonstrate an attitude of personal curiosity, a rising knowledge of cultures, and an evolving range of skills for living and working among others with other worldviews and ways of life.

Course Outcomes

1. Describe the nature of science.

Learning Objectives

Define science.

Explain how scientific knowledge is gained.

List steps typically included in a scientific method.
Describe "theory" in the context of science.
Explain the importance of science in society.

2. Describe what the science of biology entails.

Learning Objectives

Define biology.
List unifying properties of life.
List the levels of biological organization.
Explain the importance of biology in society.

3. Summarize what is meant by health and well-being.

Learning Objectives

Define the terms "health" and "well-being."
Differentiate between physical health, mental health, and social health.
Differentiate between individual health, community health, and public health.

4. Describe the ecological model of health.

Learning Objectives

Explain what is meant by "nature versus nurture."
Differentiate between internal and external factors that influence health.
Identify individual and societal decisions that influence health.

5. Describe how individual characteristics influence health.

Learning Objectives

Outline how genotype contributes to phenotype.
Describe examples of individual characteristics that influence health.
Identify individual characteristics that protect against environmental risk factors.

6. Assess how individual choices influence health.

Learning Objectives

Explain how food choices and nutrition affect health.
Describe the health benefits of exercise and fitness.
Describe how sleep quality influences health.
Explain how drugs and alcohol affect health.

7. Analyze the impact of external environmental factors on health.

Learning Objectives

Identify social determinants of health.
Describe examples of external factors that can influence health.
Differentiate between the "natural" and "built" environment.
Explain the societal impact on environmental health factors.

8. Explain the relationship between living conditions and health.

Learning Objectives

Describe how housing quality influences health.
Explain how socioeconomic status affects housing access and health disparities.
Identify solutions to reduce health concerns related to poor living conditions.

9. Describe the interdisciplinary nature of environmental science.

Learning Objectives

Define environmental science as a scientific discipline.
Describe the role of environmental science in addressing emerging health challenges.
Explain the importance of ecosystem services in maintaining health and well-being.

10. Describe major human impacts on the environment.

Learning Objectives

Describe past and current trends in human population growth.

Identify examples of pollutants.
Explain the causes and consequences of climate change.
Explain the causes and consequences of biodiversity loss.

11. Evaluate how complex environmental problems can influence health.

Learning Objectives

Describe how various forms of pollution influence health.
Explain how consequences of climate change influence health.
Explain how consequences of biodiversity loss influence health.
Identify solutions to reduce the negative impact health impact of environmental problems.

SCC Accessibility Statement

Disability Services provides accommodations and other supports to students with permanent and temporary disabilities that affect their SCC experience. Disabilities may include mental health (anxiety, depression, PTSD), ADHD, learning disabilities, chronic health conditions (migraine, fibromyalgia), sensory disabilities, and temporary disabilities (broken arm, surgery). Common accommodations are extended test time, private room for testing, audiobooks, and sign language interpreter.

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