# **SLO to ILO Alignment Reports**



# **CAN - 00 - Institutional Learning Outcomes (ILOs)**

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

#### **CAN Dept - Biological & Health Sciences**

**CAN BIOL 100**: Intro To Life Sciences

genetics: Explain the role of DNA and genes in the inheritance of traits and the role that such traits have in natural selection and evolution.

**CAN BIOL 100**: Intro To Life Sciences

analyze science info: Investigate social and environmental problems, discriminating scientific from non-scientific information, and effectively communicating the analysis.

CAN BIOL 110 : Principles Of Biology

traits of life: 1. Describe key characteristics of all living things

CAN BIOL 110 : Principles Of Biology

analyze info: 5. Gather, evaluate, and effectively organize information to analyze contemporary issues in science.

CAN BIOL 110 : Principles Of Biology

Scientific method: 6. Apply the scientific method of observation, hypothesis, prediction, experimentation, and interpretation of results.

CAN BIOL 130 : Human Biology

analyze issue: Find, evaluate the validity of, and analyze information about contemporary topics in human biology.

CAN BIOL 130 : Human Biology

vital processes: Describe essential biological structures and processes that occur at the molecular and cellular levels and explain how they enable life.

CAN BIOL 130 : Human Biology

disease: Explain how malfunctions of these organ systems can cause disease.

CAN BIOL 132 : Human Biology Laboratory

scientific method: apply all steps of the scientific method to answer questions and solve problems.

CAN ILO #1 - Critical Thinking - Select, evaluate, and use information to investigate a point of view, support a conclusion, or engage in problem solving.

CAN BIOL 132 : Human Biology Laboratory

genetic inheritance: analyze inheritance of traits using genetic data

CAN BIOL 225 : Biology Of Organisms

scientific method: Explain and practice the scientific method of inquiry.

CAN BIOL 225 : Biology Of Organisms

adaptive behavior: Analyze behavioral adaptations of organisms and their basis.

CAN BIOL 230 : Cell and Molecular Biology

**gene and cell cycle regulation:** Provide specific examples to describe the various levels of eukaryotic gene regulation and cell cycle regulation, and explain how these molecular mechanisms usually ensure successful reproduction of healthy cells.

CAN BIOL 240 : General Microbiology

classification and impact on health: Compare and contrast the major classes of bacterial, eukaryotic, and acellular microbes and their relationships to human and/or environmental health.

CAN BIOL 260 : Human Physiology

membrane potential: Explain the basis of membrane potentials and their significance to physiologic control systems

CAN BIOL 260 : Human Physiology

scientific analysis: Propose and/or execute laboratory experiments in physiology. Analyze, interpret and effectively communicate results from these experiments.

CAN BIOL 260 : Human Physiology

information competency: Research, summarize and cite articles from peer-reviewed scientific literature.

CAN BIOL 260 : Human Physiology

metabolism and exercise: Describe how multiple physiologic systems integrate their responses to maintain control of metabolism and exercise.

CAN BIOL 260 : Human Physiology

application to lifestyle: Apply knowledge of physiologic processes to develop a healthy lifestyle, and predict the likely impact of unhealthy practices on bodily well-being.

CAN BIOL 310 : Nutrition

Informational Competency.: Differentiate between scientific, evidence-based nutrition information and nutrition fads.

CAN BIOL 310 : Nutrition

Read Nutrition labels: Students will be able to accurately analyze the nutrition labeling of food products and interpret the information.

CAN BIOL 310 : Nutrition

**Knowledge of Guidelines:** Apply to their own diets the knowledge of Dietary Guidelines for Americans/MyPlate, including the major nutrients, recommended servings and quantities of servings.

CAN ILO #2 - Creativity - Produce, combine, or synthesize ideas in creative ways within or across disciplines.

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CAN ILO #3 - Communication - Use language to effectively convey an idea or a set of facts, including the accurate use of source material and evidence according to institutional and discipline standards.

## **CAN Dept - Biological & Health Sciences**

**CAN BIOL 100**: Intro To Life Sciences

traits of life: Describe essential biological structures and processes that occur at the molecular, cellular, and organismal levels that enable life.

**CAN BIOL 100**: Intro To Life Sciences

**Discuss ecological principles that influence plant, animal and human interactions.:** Discuss ecological principles that influence plant and animal interactions within ecosystems, communities, and populations.

CAN BIOL 110 : Principles Of Biology

life processes: 2. Describe essential biological structures and processes that occur at the molecular, cellular, and organismal levels that enable life.

CAN BIOL 110 : Principles Of Biology

genetics: 3. Discuss the functions of genes and their role in inheritance and evolution.

CAN BIOL 110 : Principles Of Biology

ecology: 4. Discuss ecological principles that influence plant and animal interactions within ecosystems, communities, and populations.

CAN BIOL 130 : Human Biology

analyze issue: Find, evaluate the validity of, and analyze information about contemporary topics in human biology.

CAN BIOL 130 : Human Biology

organ systems: Describe the basic structure and physiology of human organ systems and how they function to maintain life.

CAN BIOL 130 : Human Biology

genetics, disease, evolution: Explain the role of genetics and environment in health, disease, and evolution.

CAN BIOL 225 : Biology Of Organisms

traits of phyla: Describe key characteristics of different phyla and discuss their phylogeny.

CAN BIOL 225 : Biology Of Organisms

organ systems and homeostasis: Compare the various structures of diverse organisms and explain how they are used to maintain essential life processes.

CAN BIOL 225 : Biology Of Organisms

mechanisms of evolution: Discuss how mechanisms, including natural selection, affect evolution.

CAN BIOL 225 : Biology Of Organisms

embryogenesis: Describe embryonic development of animals and plants and explain its significance.

CAN BIOL 230 : Cell and Molecular Biology

**transformation of energy:** Describe and explain how enzymes and specific organelles function in catabolic and anabolic (photosynthetic) pathways during cellular transformation of energy and organic matter.

CAN ILO #3 - Communication - Use language to effectively convey an idea or a set of facts, including the accurate use of source material and evidence according to institutional and discipline standards.

#### CAN BIOL 230 : Cell and Molecular Biology

**transformation of energy:** Describe and explain how enzymes and specific organelles function in catabolic and anabolic (photosynthetic) pathways during cellular transformation of energy and organic matter.

#### CAN BIOL 230 : Cell and Molecular Biology

**genetics and evolution:** Compare and contrast the various processes of gene expression, genetic transfer, and gene regulation in bacterial and eukaryotic cells, and relate them to biological evolution and metabolism.

#### CAN BIOL 240 : General Microbiology

**subcellular structures and function:** Describe and distinguish between the major macromolecules and subcellular structures in bacteria and eukaryotic cells, and explain how these structures determine associated functions in an organism.

#### CAN BIOL 240 : General Microbiology

metabolic enzymes: Describe and explain how enzymes function in metabolic pathways during the transformation of energy and organic matter (especially carbon) by cells.

#### CAN BIOL 240 : General Microbiology

**genetics and evolution:** Compare and contrast the various processes of genetic transfer, gene expression, and gene regulation in microbial cells and relate them to microbial evolution, growth and metabolism.

#### CAN BIOL 240 : General Microbiology

**immune response:** Compare and contrast specific mechanisms of innate and acquired immunity in humans, and describe how each aids in defense against specific infectious diseases of major organ systems.

### CAN BIOL 240 : General Microbiology

analysis and communication: Organize and analyze qualitative and quantitative data into cohesive and well-written laboratory reports that properly reference relevant scientific literature.

# CAN BIOL 250 : Human Anatomy

form and function: Explain how the shape and composition of anatomical structures determine their function.

# CAN BIOL 250 : Human Anatomy

changes through lifespan: Describe the anatomical changes that occur throughout the human lifespan.

# CAN BIOL 250 : Human Anatomy

gross and microscopic: Describe the gross and microscopic anatomical features of human organ systems.

# CAN BIOL 260 : Human Physiology

homeostatic control systems: Describe the coordinated responses of physiologic systems to maintain homeostasis and to regulate change and growth.

CAN ILO #4 - Community - Understand and interpret various points of view that emerge from a diverse world of peoples and cultures.

# **CAN Dept - Biological & Health Sciences**

CAN BIOL 250 : Human Anatomy

cadaver appreciation: Develop respect and appreciation for the gift of human cadavers; explain and defend their use in anatomy education.

**CAN BIOL 260**: Human Physiology

teamwork: Demonstrate proper and effective interpersonal conduct and teamwork while performing laboratory experiments and writing cohesive lab reports.

CAN ILO #5 - Quantitative Reasoning - Represent complex data in various mathematical forms (e.g., equations, graphs, diagrams, tables, and words) and analyze these data to draw appropriate conclusions.

# **CAN Dept - Biological & Health Sciences**

CAN BIOL 132 : Human Biology Laboratory

data, graphs: create and interpret graphs and tables with data

CAN BIOL 132 : Human Biology Laboratory

genetic inheritance: analyze inheritance of traits using genetic data

CAN BIOL 225 : Biology Of Organisms

scientific method: Explain and practice the scientific method of inquiry.

CAN BIOL 230 : Cell and Molecular Biology

**laboratory competency:** Use current laboratory techniques and apply the scientific method to identify and isolate various biological macromolecules and organelles, and to analyze enzyme activity and metabolic pathways.

CAN BIOL 230 : Cell and Molecular Biology

data analysis and communication: Organize and analyze qualitative and quantitative data into cohesive and well-written laboratory reports that properly reference relevant scientific literature.

CAN BIOL 240 : General Microbiology

analysis and communication: Organize and analyze qualitative and quantitative data into cohesive and well-written laboratory reports that properly reference relevant scientific literature.

CAN BIOL 260 : Human Physiology

scientific analysis: Propose and/or execute laboratory experiments in physiology. Analyze, interpret and effectively communicate results from these experiments.

CAN BIOL 310 : Nutrition

**Read Nutrition labels:** Students will be able to accurately analyze the nutrition labeling of food products and interpret the information.