Biological Sciences SLO to PLO Alignment(No Results)_February 2017

CAN Program - Biological Sciences

Use the Scientific Method to investigate biological questions and critically evaluate and effectively communicate scientific data.

CAN Dept - Biological Sciences

CAN BIOL 100 : Intro To Life Sciences

organize data: Effectively organize and present scientific information to a group.

CAN BIOL 103 : Native Plants and Wildflowers

Field Identification: Identify plants in the field using the knowledge of structures.

CAN BIOL 103 : Native Plants and Wildflowers

Scientific Method: Demonstrate the ability to formulate hypotheses and be able to use the scientific method to investigate biological processes and phenomenon.

CAN BIOL 103 : Native Plants and Wildflowers

Analytical Skills: Organize, analyze, and successfully communicate scientific data with clear and meaningful explanations and evaluation.

CAN BIOL 110 : Principles Of Biology

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

CAN BIOL 132 : Human Biology Laboratory

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

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

mitosis, meiosis, and Mendel: Compare and contrast chromosome movement in mitosis and meiosis, and demonstrate how molecular mechanisms of chromosomal

Use the Scientific Method to investigate biological questions and critically evaluate and effectively communicate scientific data.

CAN BIOL 230 : Cell and Molecular Biology

behavior explain Gregor Mendel?s experimental results as well as deviations from his ratios.

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

laboratory competency: Use proper laboratory procedures to successfully culture, isolate, and characterize various species of bacteria.

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 260 : Human Physiology

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

CAN BIOL 260 : Human Physiology

clinical competency: Demonstrate competency in the use of laboratory equipment to accurately measure human physiological processes, such as radial or carotid pulse, blood pressure, EMG, ECG, Respirometry, Urometry, and Glucometry.

Recognize and explain the evolutionary connections between biological structures and their function and between organisms and their environment.

CAN Dept - Biological Sciences

CAN BIOL 100 : Intro To Life Sciences

traits of life: Identify and explain how the key characteristics of all living things are essential to life.

CAN BIOL 100 : Intro To Life Sciences

processes 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

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

CAN BIOL 100 : Intro To Life Sciences

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

CAN BIOL 103 : Native Plants and Wildflowers

Botanical Nomenclature: Understand and use the correct scientific names and levels of classification to communicate the identity and relationships among native Californian Plants.

CAN BIOL 103 : Native Plants and Wildflowers

Endemism and adaptations: Explain the concept of endemism in terms of natural selection and adaptations to particular climate and soil types.

CAN BIOL 103 : Native Plants and Wildflowers

Dichotomous keys: Understand the principles behind dichotomous keys and be able both to create a simple key and use keys in the field to identify plants.

CAN BIOL 103 : Native Plants and Wildflowers

Form and Function: Recognize and explain the interconnections between several biological/biochemical structures and their biological functions.

CAN BIOL 110 : Principles Of Biology

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

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

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

Recognize and explain the evolutionary connections between biological structures and their function and between organisms and their environment.

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 132 : Human Biology Laboratory

ID anatomy: identify gross anatomical features of human organ systems and cells of each tissue type.

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 225 : Biology Of Organisms

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

CAN BIOL 230 : Cell and Molecular Biology

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 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 230 : Cell and Molecular Biology

mitosis, meiosis, and Mendel: Compare and contrast chromosome movement in mitosis and meiosis, and demonstrate how molecular mechanisms of chromosomal behavior explain Gregor Mendel?s experimental results as well as deviations from his ratios.

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

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.

Recognize and explain the evolutionary connections between biological structures and their function and between organisms and their environment.

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 250 : Human Anatomy

identify structures: Recall and identify anatomical structures from images, models, specimens and human cadavers.

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

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

gradients: Describe the role of electrical, chemical, electrochemical, and pressure gradients in driving physiological processes.

Critically evaluate biological information and examine its significance and impact on society and the environment.

CAN Dept - Biological Sciences

CAN BIOL 100 : Intro To Life Sciences

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

CAN BIOL 100 : Intro To Life Sciences

analyze science info: Gather and evaluate information to analyze contemporary issues in science.

CAN BIOL 103 : Native Plants and Wildflowers

Human Uses of Plants: Understand and be able to explain the properties of plants that have proven to be useful to Native Californians.

CAN BIOL 110 : Principles Of Biology

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

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

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

CAN BIOL 130 : Human Biology

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

CAN BIOL 132 : Human Biology Laboratory

genetic inheritance: analyze inheritance of traits using genetic data

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 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 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 250 : Human Anatomy

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

Critically evaluate biological information and examine its significance and impact on society and the environment.

CAN BIOL 260 : Human Physiology

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

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

Apply nutrition to own diet: Students should be able to apply to their own diets the knowledge of the Food Guide Pyramid, the major nutrients, recommended servings and quantities of servings.

CAN BIOL 310 : Nutrition

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

CAN BIOL 310 : Nutrition

information competency: Students can differentiate between scientific, evidence-based nutrition information and nutrition fads.

CAN Dept - Health Science

CAN HSCI 100 : General Health Science

health literacy: explain the importance of developing health literacy and being one's own healthcare advocate

CAN HSCI 100 : General Health Science

common health problems, treatments: describe prevalent contemporary health concerns and problems, their characteristics and methods of care including (but not limited to) nutrition, mental health conditions, chronic illnesses and infectious diseases.