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Courses | Details

BIOSTATISTICS, MICROTECHNIQUES & BIOPHYSICS - KGK

Started on: Thursday, 12 November 2020

Biophysics is the field that applies the theories and methods of physics to understand how biological systems work.Biophysics has been critical to understanding the mechanics of how the molecules of life are made, how different parts of a cell move and function, and how complex systems in our bodies—the brain, circulation, immune system, and others— work. Biophysics is a vibrant scientific field where scientists from many fields including math, chemistry, physics, engineering, pharmacology, and materials sciences, use their skills to explore and develop new tools for understanding how biology—all life—works.

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BIOTECHNOLOGY & GENETIC ENGINEERING - KGK

Started on: Thursday, 12 November 2020

Genetic engineering is the process of using recombinant DNA (rDNA) technology to alter the genetic makeup of an organism. Traditionally, humans have manipulated genomes indirectly by controlling breeding and selecting offspring with desired traits. Genetic engineering involves the direct manipulation of one or more genes. Most often, a gene from another species is added to an organism's genome to give it a desired phenotype.

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BIOTECHNOLOGY AND BIOINFORMATICS - KGK

Started on: Thursday, 12 November 2020

Biotechnology is technology that utilizes biological systems, living organisms or parts of this to develop or create different products.Brewing and baking bread are examples of processes that fall within the concept of biotechnology (use of yeast (= living organism) to produce the desired product). Such traditional processes usually utilize the living organisms in their natural form (or further developed by breeding), while the more modern form of biotechnology will generally involve a more advanced modification of the biological system or organism.With the development of genetic engineering in the 1970s, research in biotechnology (and other related areas such as medicine, biology etc.) developed rapidly because of the new possibility to make changes in the organisms' genetic material (DNA).Today, biotechnology covers many different disciplines (eg. genetics, biochemistry, molecular biology, etc.). New technologies and products are developed every year within the areas of eg. medicine (development of new medicines and therapies), agriculture (development of genetically modified plants, biofuels, biological treatment) or industrial biotechnology (production of chemicals, paper, textiles and food).

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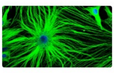

Cell Biology - KGK

Started on: Monday, 30 November 2020

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Cell Molecular Biology and Evolution

Started on: Monday, 1 June 2020

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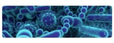

MICROBIOLOGY AND PHYCOLOGY - KGK

Started on: Monday, 12 October 2020

Microbiology is the study of microscopic organisms, such as bacteria, viruses, archaea, fungi and protozoa. This discipline includes fundamental research on the biochemistry, physiology, cell biology, ecology, evolution and clinical aspects of microorganisms, including the host response to these agents.

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Perspective of Science, Methodology and General Informatics: BIOPHYSICS

Started on: Wednesday, 11 November 2020

Biology studies life in its variety and complexity. It describes how organisms go about getting food, communicating, sensing the environment, and reproducing. On the other hand, Physics looks for mathematical laws of nature and makes detailed predictions about the forces that drive idealized systems. Biophysics is a molecular science. It seeks to explain biological function in terms of the molecular structures and properties of specific molecules. It applies the principles of Mathematics, Chemistry, Biology and Physics to study the living things and organisms. It discovers how atoms are arranged in DNA and proteins.

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PLANT PHYSIOLOGY AND METABOLISM

Started on: Monday, 1 June 2020

Plant physiology is the study of plant function and behaviour, encompassing all the dynamic processes of growth, metabolism, reproduction, defence, and communication that account for plants being alive.

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QUALITY IMPROVEMENT IN HIGHER EDUCATION

Started on: Saturday, 30 June 2018

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TISSUE CULTURE AND MICROBIAL BIOTECHNOLOGY - KGK

Started on: Tuesday, 12 June 2018

The biological processes of microorganisms have been used to make and preserve useful food products for more than 6000 years. Microbial biotechnology or industrial microbiology is the use of microorganisms to obtain an economically valuable product or activity at a commercial or large scale. The microorganisms used in industrial processes are natural, laboratory-selected mutant or genetically engineered strains. Economically valuable products such as alcohols, solvents, organic acids, amino acids, enzymes, fermented dairy products, food additives, vitamins, antibiotics, recombinant proteins and hormones, biopolymers, fertilizers, and biopesticides are produced by microorganisms that are used in chemical, food, pharmaceutical, agricultural, and other industries. Biodegradation and biotransformation of complex compounds, domestic and industrial wastewater treatment, biomining, and enhanced oil recovery are examples of microbial valuable activities. According to the UN Convention on Biological Diversity, microbial biotechnology can be denned as any technological application that uses microbiological systems, microbial organisms, or derivatives thereof, to make or modify products or processes for specific use.

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