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Introduction to Biological Engineering

Introduction to organ and cell functions in the human body. Introduction to biology. Coding DNA-> RNA -> protein. In-vivo and in-vitro models of biological systems. Cell structure and function. Fundamentals of Anatomy and organ functions. Cell signaling and decision making. Systems Biology. Bioinformatics. Problem solving in Medicine and Biology in terms of Mechanical Engineering principles and practices. Introduction to applications: Tissue Engineering, Biomechanics, Biomaterials, Biomedical Devices. To attend this course, sufficient knowledge of the material of the following courses is strongly recommended: Operating Systems and Programming Languages.