Semester I BPD-C102Theory Courses

ANATOMY AND PHYSIOLOGY

The Course learning outcomes (COs): On completion of the two years B.P.Ed., program, the students will be learning and able to do/perform the following…….

CO-1. Memorizing the concepts of anatomy and physiology.

CO-2. Estimating the concepts of human body systems, fuel for muscular work, neuromuscular junction and hormones.

CO-3. Identifying the effects of exercises on various body systems.

CO-4. Explaining the functions of various body organs and systems.

CO-5. Establishing the concept of diet for performance enhancement and recovery of the body.

UNIT-IAnatomical and Physiological Basis (10 Hrs.)

Brief Introduction of Anatomy and physiology in the field of Physical Education.

Introduction of Cell and Tissue.

The arrangement of the skeleton – Function - of the skeleton – Ribs and Vertebralcolumn and the extremities – joints of the body and their types

Gender differences in the skeleton.

Types of muscles.

UNIT-IIAnatomical and Physiological Basis (15 Hrs.)

Blood and circulatory system: Constituents of blood and their function –Blood groupsand blood transfusion, clotting of blood, the structure of the heart-properties of the heartmuscle, circulation of blood, cardiac cycle, blood pressure, Lymph and Lymphatic, circulation. Cardiac output.

The Respiratory system: The Respiratory passage – the lungs and their structure and exchange of gases in the lungs, mechanism of respiration (internal and external respiration) lung capacity, tidal volume.

The Digestive system: structure and functions of the digestive system, Digestive organs, Metabolism

UNIT-IIIExcretory& Nervous Systems, Endocrine glands & Sense Organs (15 Hrs.)

The Excretory system: Structure and functions of the kidneys and the skin.

The Endocrine glands: Functions of glands pituitary, Thyroid, Parathyroid. Adrenal, Pancreatic and the sex glands.

Nervous systems: Function of the Autonomic nervous system and Central nervous system. Reflex Action,

Sense organs: A brief account of the structure and functions of the Eye and Ear

Neuromuscular junction

Transmission of nerve impulse across it.

Fuel for muscular activity

UNIT-IVMusculo-Physiological Concepts (15 Hrs.)

Effect of exercise and training on cardiovascular system.

Effect of exercise and training on respiratory system.

Effect of exercise and training on muscular system

Role of oxygen- physical training, oxygen debt, second wind, vital capacity.

References:

Gupta, A. P. (2010). *Anatomy and physiology.* Agra: SumitPrakashan.

Gupta, M. and Gupta, M. C. (1980). *Body and anatomical science.* Delhi: Swaran Printing Press.

Guyton, A.C. (1996). Textbook of Medical Physiology, 9th edition. Philadelphia: W.B. Saunders.

Karpovich, P. V. (n.d.). *Philosophy of muscular activity.* London: W.B. Saunders Co.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO 1								
CO 2								
CO 3								
CO 4								
CO 5								