

BASICS OF HUMAN PHYSIOLOGY

(3+0 Cr. Hr)

COURSE OBJECTIVES

The outline of this course has been drawn with the objective to provide basic knowledge of human physiology and various parts of the body. It will acquaint the students with initial information about human body structure and its functions.

COURSE CONTENTS:

- i. INTRODUCTION**
 - a. Definition of Physiology
 - b. Importance of Anatomy and Physiology in Sports
 - c. Terms & Terminologies used in Anatomy and Physiology

- ii. TISSUES AND ORGANS**
 - a. Definition
 - b. Types
 - c. Physiology Endocrine System in Human Body

- iii. PHYSIOLOGY OF SKELETAL SYSTEM**
 - a. Physiology of Bones
 - b. Mechanism of Bone Mineralization
 - c. Classification of major bones of human body
 - d. Coordination of Musculoskeletal system

- iv. PHYSIOLOGY OF MUSCULAR SYSTEM**
 - a. Physiology of Cardiac Muscles
 - b. Physiology of Smooth Muscles
 - c. Physiology of Skeletal Muscles
 - d. Nerve Stimulus to Muscular system
 - e. Muscle Nomenclature
 - f. Classification of Major Muscles of Human Body

- v. PHYSIOLOGY OF DIGESTIVE SYSTEM**
 - a. Overview of Physiology of Human GIT
 - b. Motility of GIT
 - c. Secretary function of GIT
 - d. Absorptive function of GIT

- vi. PHYSIOLOGY OF CARDIOVASCULAR SYSTEM**
 - a. Overview of Physiology of Heart and Blood vessels
 - b. Cardiac Cycle
 - c. Conduction system of Heart
 - d. Heart Sounds

- e. Heart Rate, Blood Pressure, Cardiac Output etc.
- f. Functions of Blood
- g. Introduction to Lymphatic System

vii. **PHYSIOLOGY OF NERVOUS SYSTEM**

- a. Overview of Physiology of Nervous System
- b. Physiology of Central Nervous System
- c. Physiology of Peripheral Nervous System
- d. Physiology of Neurons

RECOMMENDED BOOKS

1. Sherwood, L. (2015). *Human physiology: from cells to systems*. Cengage learning.
2. Hull, K. L. (2014). *Study Guide to Accompany Memmler The Human Body in Health and Disease*. Lippincott Williams And Wilkin.
3. Peck, M. (2015). *Discovering Human Physiology*.
4. Kenney, W. L., Wilmore, J., & Costill, D. (2015). *Physiology of sport and exercise 6th edition*. Human kinetics.
5. Herman, I. P. (2016). *Physics of the human body (Biological and Medical Physics, Biomedical Engineering)*. Springer.