

SEMESTER-II
B.A. (Prog.) with Physical Education as a Minor

B.A.-PE-DSC-2-(4)-ANATOMY AND PHYSIOLOGY

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
B.A.-PE-DSC-2-(4) ANATOMY AND PHYSIOLOGY	4	3	0	1	Class XII pass	NIL

Learning Objective: To provide learners with the basic knowledge and practices of anatomical structures and functions of the human body.

Learning Outcomes:

1. The learner will acquire the basic knowledge of the anatomy and physiology of the human body. They will develop an understanding of the functions of each system and body organs. Such core knowledge and skill will help to create a strong foundation to engage human subjects of all ages, sexes, and abilities in different games/ sports/ fitness programs.
2. The learner will develop the understanding and knowledge of the definition of anatomy & physiology, cell-microscopic structure & functions of its organelle, tissue classification & functions, organs, systems of the body, bone classification and structure, joints-classification, structure of synovial joints, movements at various joints. The learner will also learn to count the pulse rate. The learner will be able to compare (individual differences), and correlate (different systems/games for physical education) to analyze performance.
3. The learners will develop an understanding and knowledge of the muscular system -classification, structure, functions & properties of skeletal muscle, smooth muscle & cardiac muscle. types of muscular contractions, Names of various muscles acting on various joints, cardio-vascular system structure of heart, cardiac cycle, blood pressure, cardiac output, composition & function of blood, athlete's heart, respiratory system structure and function, second wind, oxygen debt. The learners will be able to learn the measurement of blood pressure and study of various bones of human body. The learner will also be able to compare (individual differences), and correlate (different systems/ games as per syllabus for physical education) to analyze performance.
4. The learner will be able to explain different body systems (as per the syllabus) with the help of models and various movements of the joints. The learner will also be able to compare (individual differences), and correlate (different systems/ games for physical education) to analyze performance.

SYLLABUS

Credit: 4 - (3 Theory, 1 Practical)

Theory: 45 Hours

Practical: 30 Hours

PART-A: THEORY

Unit-1: Introduction to Anatomy and Physiology (11 Hours)

1. Meaning and Definition of Anatomy and Physiology.
2. Importance of Anatomy and Physiology in Physical Education and Sports
3. Description of Cell and Tissues

Unit-2: Introduction to Various Systems-I (11 Hours)

1. Skeletal System: Structural and Functional Classification of Bones, Types of Joints, Functions of Skeleton System.
2. Muscular System: Structural and Functional Classification of Muscles, Properties of Muscles, Types of Muscular Contraction, Functions of Muscular System.

Unit-3: Introduction to Various Systems-II (12 Hours)

1. Cardiovascular System: Structure and Functions of Human Heart, Circulation of Blood, Functions of Blood, Functions of Cardiovascular System, Blood Pressure, Cardiac Output
2. Respiratory System: Structure and Functions of Respiratory System, Different types of Respiration, Second Wind, Oxygen Debt

Unit-4 Introduction to Various Systems-III (11 Hours)

1. Excretory System: Structure and Functions of Excretory System.
2. Digestive System: Structure and Functions of Excretory System.

PART-B: PRACTICALS (Any three) (30 Hours)

1. Microscopic structure of Cell/ Tissue.
2. Measurement of Resting Heart Rate.
3. Measurement of Blood Pressure.
4. Measurement of Respiratory/ Breathing Rate.

Marking Scheme:

Theory Written Exam	:	90 Marks
Internal Assessment	:	30 Marks
Practical	:	40 Marks

Suggested Readings:

1. Jain, A.K. (2002), Anatomy & Physiology for Nurses. Arya Publishers, Delhi.
2. Moried, E.N. (2007), Essentials of Human Anatomy & Physiology. Ed.8th Dorling Kindersley, India.
3. Prives, M. and others (2004), Human Anatomy Vol. I & II Paragon, Delhi.
4. Seeley & others (2008), Anatomy & Physiology. McGraw Hill, Boston.
5. Tortora (2003), Principles of Anatomy & Physiology, New York: John Willy & Sons.
6. William, C.S. (2000), Essentials of Human Anatomy & Physiology, Benjamin.
7. Wilson and Waugh (1996), Anatomy & Physiology in Health & Illness. Churchill Livingstone.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.