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DEPARTMENT OF PHYSICAL EDUCATION & SPORTS SCIENCES

SEMESTER – II

**Bachelors of Physical Education in the Field
of Multidisciplinary Study (Hons.)**

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SEMESTER-II

B.A.-PE-DSC-2- (4)-2.1-ANATOMY AND PHYSIOLOGY

M.M.: 100

No. of Credits: 04 (Theory)

Theory: 60 Hours

Objective: To provide the basic knowledge of anatomical structures and functions of the human body.

Learning Outcomes of the Paper:

1. The learners will be able to understand the human structure and functions of the human body.
2. The learners would be able to apply the scientific knowledge of anatomy and physiology in relation to physical education and sports.
3. The learners would be able to analyze the effect of exercise on various human body systems.

Unit-1: Introduction to Anatomy and Physiology

(20 Hours)

1. Meaning and Definition of Anatomy, Physiology and Exercise 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

(20 Hours)

1. Skeletal System: Structural and Functional Classification of Bones, Types of Joints, Different types of Movement around the Joints, Effects of Exercise on Skeletal System
2. Muscular System: Structural and Functional Classification of Muscles, Properties of Muscles, Types of Muscular Contraction, Effects of Exercise on Muscular System, Metabolism

Unit-3: Introduction to Various Systems-II

(20 Hours)

1. Circulatory System: Structure and Function of Human Heart, Circulation of Blood, Functions of Blood, Effects of Exercise on Circulatory System, Blood Pressure, Cardiac Output
2. Respiratory System: Structure and Function of Respiratory System, Effects of Exercise on Respiratory System, Second Wind, Oxygen Debt

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, NewYork: 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.

SEMESTER-II

B.A.-PE-DSC-2- (4)-2.2-EXERCISE PHYSIOLOGY

M.M.: 100

No. of Credits: 04 (Theory)

Total Theory: 60 Hours

Objective: To provide the functional understanding of various systems of the human body.

Learning Outcomes of the Paper:

1. The learners will be able to understand the physiological basis of physical activities and functioning of various systems of the human body.
2. The learners would be able to analyze the effect of exercise on various human body systems.
3. The learners would be able to apply the acquired knowledge of physiology in relation to physical education and sports.

Unit-1: Introduction to Physiology

(15 Hours)

1. Meaning and Definition of Physiology and Exercise Physiology
2. Minute Structure and Functions of Cell and its Organelles
3. Structure and Classifications of Tissues
4. Essential Properties of Living Organisms
5. Physiological Concept of Health and Fitness

Unit-2: Cardio-Pulmonary System

(15 Hours)

1. Cardio-vascular System and Blood: Cardiac Cycle, Pumping action of Heart and its Regulation; Blood Pressure, Its Maintenance and Regulation; Cardiac Output and its Regulation; Functions of Blood and Blood Clotting; Effect of Exercise on Circulatory System
2. Respiratory System: Mechanism of Respiration; Pulmonary Ventilation and its Regulation; Second-wind and Oxygen Debt; Effect of Exercise on Respiratory System

Unit-3: Digestive, Nervous and Sensory Systems

(15 Hours)

1. Digestive System: Secretion and Function of the Digestive Juices; Functions of Liver; Absorption of Food; General Metabolism, Metabolism of Carbohydrates, Fats and Proteins; Temperature Regulation; Effect of Exercise on Digestive System
2. Nervous System: Functions of the important parts of the Nervous System, Cerebrum, Medulla Oblongata, Thalamus, Cerebellum and Spinal Cord; Functions of the Autonomic Nervous System; Basic Physiological Mechanism governing Posture and Equilibrium; Effect of Exercise on Nervous System
3. Sensory System: General Sensations (Cutaneous and Kinesthetic); Various forms of Senses with special reference to Vision and Hearing

Unit-4: Excretory, Endocrine and Reproductive Systems

(15 Hours)

1. Excretory System: Excretion of Water from the Body through Skin (Sweating), Lungs, Kidney and GI Tract; Effect of Exercise on Excretory System
2. Endocrine System: Secretion of Endocrine Glands (Pituitary, Thyroid, Adrenal & Pancreas); Role of their secretion in Growth, Development and Body Functions; Effect of Exercise on Endocrine System
3. Reproductive System: Physiology of Human Reproduction, Basic Knowledge of Transmission of Hereditary Characteristics

SUGGESTED READINGS

1. Jain, A.K.(2002), Anatomy & Physiology for Nurses. Arya Publishers, Delhi.
2. Koley, Shyamal (2007), Exercise Physiology – A Basic Approach. New Delhi: Friends Publications.
3. Kumari, Sheela, S.; Rana, Amita; and Kaushik, Seema (2008), Fitness, Aerobics and Gym Operations. New Delhi: Khel Sahitya Kendra.

4. Mordred, E.N.(2007), Essentials of Human Anatomy & Physiology. Ed.8th Dorling Kindersley, India.
5. Prives, M. and others (2004), Human Anatomy Vol. I & II Paragon, Delhi.
6. Seeley & others (2008), Anatomy & Physiology. McGraw Hill, Boston.
7. Tortora (2003), Principles of Anatomy & Physiology, NewYork: John Willy & Sons.
8. William, C.S. (2000), Essentials of Human Anatomy & Physiology, Benjamin.
9. Wilson and Waugh (1996), Anatomy & Physiology in Health & Illness. Churchill Livingstone.

Semester-II

B.A.-PE-GE-(4)-2.1-INCLUSIVE PHYSICAL EDUCATION

MM: 100

Credit: 4 (Theory-3, Practical-1)

Theory: 45 hours teaching

Practical: 30 hours

Part –A Theory (45 hours)

Unit-1 Meaning & scope of Inclusive Physical Education (15 hours)

1. Need & Importance of Inclusive Physical Education
2. Role of Educational Institution in developing Inclusiveness
3. Agencies supporting and promoting Inclusive Physical Education for disability sport

Unit-2 Understanding challenges & special needs for the people with Disability face in daily life (15 hours)

1. Implementing programme for people with disability
2. Supervision of carefully designed physical education program for people with disability

Unit - 3 Instructional programme for a learner with a disability, based on a comprehensive assessment (15 hours)

1. Learning the Sports skills
2. Physical Fitness
3. Volunteerism

Part B- Practical: (30 hours)

1. Organize inclusive sports event in your college
2. Volunteer for sports events for people with disability
3. Write briefly about the any two teaching aids used in Inclusive Physical education