

BASIC SCIENCES OF SPORTS

Outline Syllabus	BASIC SCIENCES OF SPORTS Semester: III Paper Code:BA306
Credits	4 (Theory: 3, Practical; 1)
Marks	100: External = 50 (Theory) + 30 (Practical)+ 20 (Internal Assessment)
Contact Hrs	75 Hours (Theory: 45 Hours, Practical: 30 hours) 15 hours theory= 1 Credit, 30 Hours practical = 1 credit NOTE: <ul style="list-style-type: none"> ➤ Six periods per week (4 periods for Theory and 2 periods Practical) ➤ One unit contains 60-80 students for theory and 30-40 students for Practical. ➤ Teacher who is preparing three teams for University Inter-college
	Competitions, his/her workload shall be counted by including three periods per week in the teaching load.
UNITS	TOPICS
Unit 1	1. Anatomy and Physiology: Meaning and Importance.
	2. Physiological Terms: Vital capacity, second wind. Oxygen debt. Resting Heart Rate, Cardiac Output and VO ₂ max.
	3. Kinesiology: Meaning, importance of Kinesiology in Games and Sports.
	4. Biomechanics: Meaning, importance of Biomechanics in Games and Sports.
Unit 2	1. Biomechanical concept: Newton's laws of Motion. Levers. centre of gravity, Equilibrium, friction and force.
	2. Skeletal System: Meaning, Types of bones, Functions & Structure.
	3. Joints: Meaning, types and movements.
	4. Muscular system: Introduction, Classification (Functional & Structural), Muscle Contractions
Unit 3	1. Respiratory system: Introduction, Types of respiration, organs and mechanism of respiratory system and Measurements of Ventilation.
	2. Circulatory System: Introduction, structure & functions of heart. Cardiac Cycle, Basic Terminology: Cardiac output, stroke volume. Heart rate and blood pressure.
	3. Digestive system: Introduction, organs and mechanism of Digestive system.
	4. Endocrine system: Introduction, location and functions of endocrine glands.