

B.Tech Biotechnology: Semester-II	
BBT-105 – Sports and Yoga	
Teaching Scheme	Examination Scheme
Lectures: 2 hrs/Week	Audit Course
Tutorials: 0 hr/Week	
Credits: 0	End Semester Exam – 0 marks

Course Objective:

To make the students understand the importance of sound health and fitness principles as they relate to better health

Course Learning Outcomes:

After completing the course, the student shall be able to:

CO1: Practice Physical activities and Yoga focusing on yoga for strength, flexibility, and relaxation

UNIT-I: INTRODUCTION TO PHYSICAL EDUCATION

Meaning & definition of Physical Education

Aims & Objectives of Physical Education

Changing trends in Physical Education

Olympic Movement

Ancient & Modern Olympics (Summer & Winter)

Olympic Symbols, Ideals, Objectives & Values

Awards and Honours in the field of Sports in India (Dronacharya Award, Arjuna Award, Dhyan Chand Award, Rajiv Gandhi Khel Ratna Award etc.)

Physical Fitness, Wellness & Lifestyle

Meaning & Importance of Physical Fitness & Wellness

Components of Physical fitness

Components of Health related fitness

Components of wellness

Preventing Health Threats through Lifestyle Change

Concept of Positive Lifestyle

Fundamentals of Anatomy & Physiology in Physical Education, Sports and Yoga

Define Anatomy, Physiology & Its Importance

Effect of exercise on the functioning of Various Body Systems. (Circulatory System, Respiratory System, Neuro-Muscular System etc.)

Head

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UNIT-II: KINESIOLOGY, BIOMECHANICS & SPORTS

Meaning & Importance of Kinesiology & Biomechanics in Physical Edu. & Sports
Newton's Law of Motion & its application in sports.
Friction and its effects in Sports.

Postures

Meaning and Concept of Postures.
Causes of Bad Posture.
Advantages & disadvantages of weight training.
Concept & advantages of Correct Posture.
Common Postural Deformities – Knock Knee; Flat Foot; Round Shoulders; Lordosis, Kyphosis, Bow Legs and Scoliosis.
Corrective Measures for Postural Deformities

Yoga

Meaning & Importance of Yoga
Elements of Yoga
Introduction - Asanas, Pranayama, Meditation & Yogic Kriyas
Yoga for concentration & related Asanas (Sukhasana; Tadasana; Padmasana & Shashankasana)
Relaxation Techniques for improving concentration - Yog-nidra

Yoga & Lifestyle

Asanas as preventive measures.
Hypertension: Tadasana, Vajrasana, Pawanmuktasana, Ardha Chakrasana, Bhujangasana, Shavasana.
Obesity: Procedure, Benefits & contraindications for Vajrasana, Hastasana, Trikonasana, Ardha Matsyendrasana.
Back Pain: Tadasana, Ardha Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana.

Diabetes: Procedure, Benefits & contraindications for Bhujangasana, Paschimottasana, Pawanmuktasana, Ardha Matsyendrasana.

Suggested Readings:

- Modern Trends and Physical Education by Prof. Ajmer Singh.
- Light On Yoga by B.K.S. Iyengar.
- Health and Physical Education – NCERT (11th and 12th Classes)

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