

## POOL OF DISCIPLINE SPECIFIC ELECTIVES

### DISCIPLINE SPECIFIC ELECTIVE COURSE -5 (DSE-5)

#### Physiological Anthropology

#### 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		
Physiological Anthropology	04	03	Nil	01	Class XII pass	NIL

(Teaching hours required: Theory, 45 hours; Practical, 30 hours)

#### Course Objectives

1. To familiarise the student with the idea of homeostasis, physical performance, physiological adaptation and factors influencing adaptation.
2. To make them understand the relationship between physique and human body composition

#### Learning Outcomes

The students will be able to:

1. demonstrate understanding of the fundamentals of physiological anthropology.
2. to identify the physiological changes during performance and factors influencing adaptation with respect to environmental adaptation.
3. relate physique and human body composition on one hand and the importance of nutrition on the other.

#### Unit 1 (10 Hours)

Fundamentals of work physiology- homeostasis; metabolism and energy and systems; exercise, respiratory system and haemodynamics (blood pressure, pulse, rate, heart rate, and haematocrit).

#### Unit 2 (11 Hours)

Acute physiological adjustments during transition from resting homeostasis to sub-maximal and maximal exercise and physiological adaptations

#### Unit 3 (12 Hours)

Cardio-vascular and respiratory endurance, physical working capacity and physical fitness; Reproductive health, regulation of metabolism, growth and energy balance

#### Unit 4 (12 Hours)

Physical performance and environmental stress; inter-relationship between physique, body composition and nutrition

## **Practical (30 Hours)**

1. Measure the cardiovascular functions -

Blood pressure

Heart rate

Pulse rate

2. Measure the Respiratory functions (Static and Dynamic lung functions)

3. Physical activity assessment

## **References**

1. C. Bouchard, S.N Blair, W.L Haskell (Editors) (2014). *Physical Activity and Health*. 2<sup>nd</sup> Edition. Human Kinetics.
2. William D. McArdle, Frank I. Katch, Victor L. Katch (2014). *Exercise Physiology Energy, Nutrition and Human Performance*. Lippincott Williams & Wilkins.

## **Teaching Learning Process**

Classroom teachings

Seminars and presentations

Practical classes

## **Assessment Methods**

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

## **Keywords:**

Exercise physiology, cardio-respiratory endurance, physical working capacity, fitness, environmental stress