

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*. 2nd 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