

SYLLABUS OF DISCIPLINE SPECIFIC ELECTIVE PAPERS (DSE)
SEMESTER-V
B.A.-DSE-PE-(4)-1.2
STRENGTH AND CONDITIONING
DSE

Sl. No.	Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-Requisite of the Course (if any)
			Lecture	Tutorial	Practical/ Practice		
2	B.A.-DSE-PE-(4)-1.3 STRENGTH AND CONDITIONING	04	3	0	1	XII Pass	NIL

Learning Objective: The objective of this course is to provide an understanding, practice and practical skills to the learners about Strength and Conditioning, Load and Adaptation, Warming-Up and Limbering Down, and Strength and Conditioning Programme Design.

Learning Outcomes:

1. The learners will be able to understand the concept and applications of Strength and Conditioning.
2. The learners will be able to understand the concept and applications of Load and Adaptations.
3. The learners will be able to understand and analyze the popular trends and updated research in the sports industry, specifically in the area of strength and conditioning.
4. The learners will be able to design a strength and conditioning program.

SYLLABUS

CREDITS: 4 [Theory-3, Practical-1]

Theory-45 hours

Practical-30 hours

PART-A: THEORY

UNIT- Introduction to Strength, Conditioning, Warming-up, and Cooling Down (10 Hours)

- 1.1 Meaning and Concept of Strength and Conditioning.
- 1.2 Aim and Objectives of Strength and Conditioning.
- 1.3 General Principles of Strength and Conditioning.
- 1.4 Concept and Importance of Warming-Up and Cooling Down

UNIT-II Load and Adaptation (12 Hours)

- 2.1 Training Load- Definition and types of training load.
- 2.2 Principles of training load (Frequency, Intensity, Density, and Volume).
- 2.3 Relationship between load and adaptation. Overload and critical load.
- 2.4 Concept of load and factor affecting load and adaption.

UNIT-III Strength Training & Stretching (12 Hours)

- 3.1 Strength – Definition, types and their characteristics.
- 3.2 Types of muscular contraction.
- 3.3 Development of strength using own body weight and external resistance, field tests for measuring strength.
- 3.4 Core Strength and Functional training
- 3.5 Types of Stretching- Static Stretching Techniques and Dynamic Stretching Techniques

UNIT-IV: Strength and Conditioning Programme Design

(11 Hours)

- 4.1 Exercise Selection, Training Frequency, Exercise Order, Training Load and Repetitions, Volume, Rest Periods.
- 4.2 Means and Methods of Training (Resistance Training)
- 4.3 Plyometric Training, Circuit Training, Free Weight Training Methods, Bodyweight Training Methods, Core Stability and Balance Training Methods

PART-B: PRACTICALS

(30 hours)

1. Prepare a Warming-Up Exercise Programme with illustrations.
2. Prepare a Cooling-Down Exercise Programme with illustrations.
3. Prepare a Strength and Conditioning Programme for a specific games/sport.
4. Demonstrate Exercises for Core Stability and Balance (any five).

Suggested Readings:

1. Arnheim, Danial D. & Arnheim, Helene (1987) **Essentials of Athletic Training** Toronto Times Mirror.
2. Arnheim, Danial D. (1985) **Modern Principles of Athletic Training**. Toronto Time Mirror.
3. Bunn, John W. (1955) **Scientific Principles of Coaching** Englewood Cliffs N. J. Prentice Hall, Inc.
4. Dick, Frank W. (1980) **Sports Training Principles** London: Lepus Books.
5. Haff, G.G. (2016) **Essentials of Strength Training and Conditioning** Human Kinetics.
6. Hare, Dietrich (1982) **Principles Sports Training**, Berlin: Sportverlag.
7. Jensen, Clayne R & Fisher, Garth A. (1979) **Scientific Basis of Athletic Conditioning** Philadelphia: Lea & Febiger
8. Joan A. (1987) **Coaching – an Effective Behavioural Approach**, Toronto: Time Mirror
9. Novich, Max M. & Taylor Buddy (1983) **Training and Conditioning of Athletes** Philadelphia: Lea & Febiger
10. Sands, W.A., Wurth, J.J., Hewit, J.K. (2012) **Basics of Strength and Conditioning Manual** The National Strength and Conditioning Association.
11. Shaw, D. (2020) **Sports Training** Sports Publication.
12. Shaw, D. (2021) **Athletic Care and Rehabilitation** Sports Publications.
13. Singh, Hardayal (1991) **Science of Sports Training** New Delhi: D.A.V. Publication
14. Uppal A. K. (2010) **Principles of Sports Training** Friends Publications (India)
15. Uppal A. K. (2013) **Science of Sports Training** Friends Publications (India)
16. Uppal A. K. (2013) **Scientific basis of Sports Conditioning** Friends Publications (India)

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