

Course Title: Science of Sports Training
Code Number: HPE-301
Credit Hours: 03 hrs
Pre-Requisites course Requirement/Skills: Nil

Objectives of Course

At the successful completion of this course students will be able:

- 1) The course is basically designed to create awareness in the perspective physical education for understanding the sports training and to develop a professional coach who can impart training under the scientific principles and in a systematic order.
- 2) The course will enable the future coach to place the training processes in proper and thoughtful manner.

Course Contents

Unit-I Sports Training

- 1.1 Introduction, Understanding of sports training, Coach in different capacities, relationship between coach and organization, athlete and link personals, Coaching style, Qualities of a good Coach

Unit-II Training Principles

- 2.1 Gradualness, Age Dependence, Utility, Loading/Over-Loading, Reversibility and specificity

Unit-III Components of Fitness

- 3.1 Introduction, Components their need and importance in sports

Unit-IV Fundamental Aspects and Training of Strength Abilities

- 4.1 Introduction
- 4.2 Classification of Strength:
 - 4.2.1 Maximum Strength
 - 4.2.2 Speed Strength-Elastic Strength
 - 4.2.3 Strength Endurance
 - 4.2.4 Organization of Strength Training

Unit-V Fundamental Aspects and Training of Endurance

- 5.1 Introduction, Local & general endurance types, Endurance training methods

5.2 Aerobic and anaerobic endurance short, middle and long-distance endurance

Unit-VI Fundamental Aspects and Speed Training

6.1 Introduction, Speed of movement

6.2 Phases of running action

Unit-VII Warm-Up & Cool Down

7.1 Introduction, Kinds (General, Specific)

7.2 Need and Importance

7.3 Effects of warm-up and Cool down

Unit-VIII Load (Outer and Inner Load)

8.1 Introduction

8.2 Loading factors

8.3 Training methods, forms of organization and load structure

8.4 Load and adaptation

8.5 On selected principles for the arrangement of load (increasing load, continuous load).

Teaching Learning strategies

- a) Inquiry based learning
- b) Cooperative Learning
- c) Multimedia usage
- d) Concrete examples
- e) Think -Pair-Share

Assessment and Examination

#	Elements	Weightage	Details
1	Theory Examination based Assessment	40%	It takes Place at the mid-point of the semester. It is mostly in the form of a test but owing to the nature of the course. The teacher may assess their students based on term paper, research proposal development, field work and report writing etc.
2	Formative Assessment	60%	It is continuous assessment. It includes classroom Participation, attendance, assignments and Presentations, homework, attitude, and behavior, hands on activities, short test, quizzes etc.

Recommended Books

1. Hodgson, D. R., McKeever, K. H., & McGowan, C. M. (2014). *The athletic horse: principles and practice of equine sports medicine*. Elsevier Health Sciences.

2. Haff, G. G., & Triplett, N. T. (Eds.). (2015). *Essentials of strength training and conditioning 4th edition*. Human kinetics.
3. Bompa, T., & Buzzichelli, C. (2015). *Periodization Training for Sports, 3E*. Human kinetics.
4. Baker, J., & Farrow, D. (2015). *Routledge handbook of sport expertise*. Routledge.
5. Viru, A. (2017). *Adaptation in sports training*. Routledge.