

MPD-C404SCIENTIFIC PRINCIPLES OF SPORTS TRAINING

The Course learning outcomes (COs):On completion of the two years M.P.Ed., program, the students will be learning and able to do/perform the following.....

CO-1. Memorizing the concepts of psychology and sports psychology.

CO-2. Describing the fundamental concepts of goal setting.

CO-3.Identifying the effects of various psychological variables on sports performance.

CO-4. Categorizing different methods of studying of behaviour of sports person.

CO-5. Judging the various social problems and their effect on sports performance.

UNIT I – Introduction

Sports training: Definition – Aim, Characteristics

Principles of Sports Training

Over Load: Definition, Causes of Over Load, Symptoms of Overload

Remedial Measures – Super Compensation.

UNIT II – Components of Physical Fitness

Strength: Methods to improve Strength: Weight Training, Isometric, Isotonic, Circuit Training

Speed: Methods to Develop Speed: Repetition Method, Downhill Run, Parachute Running, Wind Sprints

Endurance: Methods to Improve Endurance: Continuous Method, Interval Method, Repetition Method, Cross Country, Fartlek Training

UNIT III – Flexibility and Coordinative abilities

Flexibility: Methods to Improve the Flexibility- Stretch and Hold Method, Ballistic Method, Special Type Training: Plyometric Training.

Training for Coordinative abilities: Methods to improve Coordinative abilities: Sensory Method, Variation in Movement Execution Method, Variation in External Condition Method, Combination of Movement Method, Types of Stretching Exercises.

UNIT IV – Training Plan and Doping

Training Plan: Macro Cycle, Meso-Cycle. Short Term Plan and Long Term Plans

Periodization: Meaning, Single, Double and Multiple Periodization, Preparatory Period, Competition Period and Transition Period.

Definition of Doping – Side effects of drugs – Dietary supplements – IOC list of doping classes and methods. Blood Doping, Blood doping control – The testing programmes – Problems in drug detection – Blood testing in doping control – Problems with the supply of medicines Subject to IOC regulations: over-the- counter drugs (OTC) – prescription only medicines (POMs) – Controlled drugs (CDs). Reporting test results – Education

Influence of: Amphetamine, Anabolic steroids, Androstenedione, Beta Blocker, Choline, Creatine, Human growth hormone on sports performance. Narcotic, Stimulants: Caffeine, Ephedrine. Stimulants and sports performance.

References:

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David R. Mottram (1996) Drugs in Sport, School of Pharmacy, Liverpool: John Moore University

Hardayal Singh (1991) Science of Sports Training, New Delhi, DVS Publications

Jensen, C.R. & Fisher A.G. (2000) Scientific Basic of Athletic Conditioning, Philadelphia

