



MAHATMA JYOTIBA PHULE ROHILKHAND
UNIVERSITY, BAREILLY

NAAC A++ Accredited ISO 9001-2015 & 14001:2015 Certified

Emerging Trends in Physical Education

(Syllabus)

Unit I: Sports Biomechanics

Concept of different analysis: Mechanical analysis, Biomechanical analysis, Kinesiological analysis, Linear Kinematics, Angular Kinematics, Projectiles. Linear Kinetics of Human Movement: Inertia, Mass and Weight, Force, Momentum, Friction (Law of Friction, types of friction). Mechanical Analysis of Fundamental Motor Skills: Walking, Running, Jumping, Throwing, and Catching.

Unit II: Sports Medicine

Categories of Athletic Injuries: Traumatic, Overuse, Soft Tissue injuries – sprain and strain, Bone Injuries, Joint Injuries & P.N.F., Posture and its deformities with their corrective exercises.

Unit III: Sports Training

Determining the Systems of Training, Role of Training Means and Methods for Conditioning, Short Term Training and Long Term Training Plans.

Unit IV: Sports Psychology and Sociology

Emerging trends of sports psychology for Healthy Life Style, Quality of life moral development and well being, impact physical education and sports on the process of socialization, The relationship between biological and cognitive psychology and between brain and behaviour, Problems by high performance female athletes (social, dietary, menstrual, emotional, osteoporosis).

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Unit V: Physiology of Exercise

Exercise and Environment: Effect of exercise on Hot, Cold and High Altitude, Nutrition and Athletic Performance: Nutrition and Training components of diet, Nutrition for competition, Carbohydrate loading, Pre-event meal, feeding during exercise, fluid ingestion during and after exercise, Exercise and Aging: Physiological changes, Training adaptation in aged, Guidelines for constructing exercise programme.

References:

1. Synopsis of Surgical Anatomy – John Wright & Sons, Bristol
2. Gray's Anatomy – Williams & Warwick – Churchill Livingstone.
3. Grants – Methods of Anatomy – Basmajian & Sloncker – Williams & Wilkins.
4. Advances in Motivation in Sport & Exercise by Glyn Roberts, Human Kinetics.
5. Motivation and Emotion in Sport: Reversal Theory by John H. Kerr, Psychology Press.
6. Human Motivation by David C. McClelland, Cambridge University Press.
7. Psychology of Motivation by Denis Waitley, Nova Publishers.
8. Brunnstrom – Clinical Kinesiology, F.A. Davis.
9. Luttgens K., Hamilton N.: Kinesiology – Scientific Basis of Human Motion 9th Ed., 1997, Brown & Benchmark.
10. Rasch and Burk: Kinesiology and Applied Anatomy, Lee and Fabiger.
11. White and Punjabi – Biomechanics of Spine – Lippincott.
12. Heyward, Vivian. Advanced Fitness Assessment and Exercise Prescription, 5th ed. Human Kinetics, 2006.
13. Singh Hardayal, Sports Training, General Theory and Methods, Patiala, N.S.N.I.S. Publications. 1984
14. ACSM's Guidelines for Exercise Testing and Prescription, 8th ed., Lippincott Williams and Wilkins, 2009.

Prof. Vijay Bahadur Singh Bisht

BOS Member

Prof. SomPal Singh

Convener

Curriculum Committee in
Physical Education

