

Syllabus For B.Voc in Physical Education

Programme Template: B.Voc Course (CBCS) in Physical Education

Gauhati University

Semester	CORE COURSE (14 papers, 84 credits)	Ability Enhancement Compulsory Course(AECC) (2 papers, 4 Credits)	Skill Enhancement Course (SEC) (2 papers, 4 credit)	Elective Generic (GE) (4 papers,24 credits)	Discipline Specific Elective(DSE) (4 papers, 24credits)
I	PHE-VC-1016	ENG-AE-1012		PHE-VE-1016	
	PHE-VC-1026				
II	PHE-VC2016	ENV-AE-2012		PHE-VE-2016	
	PHE-VC-2026				
III	PHE-VC-3016		SE-3012	PHE-VE-3016	
	PHE-VC-3026				
	PHE-VC-3036				
IV	PHE-VC-4016		SE-4012	PHE-VE-4016	
	PHE-VC-4026				
	PHE-VC-4036				
V	PHE-VC-5016				PHE-VDSE-5016
	PHE-VC-5026				PHE-VDSE-5026
VI	PHE-VC-6016				PHE-VDSE-6016
	PHE-VC-6026				PHE-VDSE-6026

DETAILED SYLLABUS SEMESTER-I B.Voc in PE, Semester – I

PHE-VC-1016: FOUNDATION OF PHYSICAL EDUCATION AND SPORTS SCIENCE

Full Marks-75 (60+15)
06

Credit Point -06

Total Lectures/Week-

- Objectives:
1. To appraise the knowledge of Foundation of Physical Education.
 2. To appraise the knowledge on basis of life.

Unit 1. Introduction and Historical Foundation

- 1.1. Aim, Objectives and Definition of Physical Education and Sports Science.
- 1.2. History of Physical Education and Sports Science in India- with special reference to Ayurveda and Yoga Vayayama.
- 1.3. World History of Physical Education and Sports Science- with special reference to Olympic.
- 1.4. Gurudeva Rabindranath Tagore's Concept of Physical Education and Sports Science.

Unit 2. Physiological Foundation

- 2.1. Biological basis of life.
- 2.2. Growth and Development: Stages, Factors and Principles.
- 2.3. Age: Chronological, Anatomical, Physiological, and Mental age.
- 2.4. Modern concept of Inactive to Active life style.

Unit 3. Psychological Foundation

- 3.1. Brain and Human Psychology
- 3.2. Learning and Motor Learning
- 3.3. Play and Play Theory
- 3.4. Human Personality factors

Unit 4. Biomechanical Foundation

- 4.1. Movement and Locomotion
- 4.2. Concept of Bio-energy
- 4.3. Kinetic and Kinematic: over view

4.4. Biomechanics in Daily life and Sports

Unit 5. Sociological Foundation

5.1. Society and Socialization

5.2. Impact of Sports in Society

5.3. Traditional and Recreational Game

5.4. Cooperation and Competition in Sports: National and International level

RECOMMENDED BOOKS

1. Graham, G. (2001) Teaching Children Physical Education: Becoming a Master Teacher. Human Kinetics, Champaign, Illinois, USA.
2. Kamlesh, M.L. & Singh, M.K. (2006) Physical Education (Naveen Publication).
3. Lau, S.K. (1999) Great Indian Players, New Delhi, Sports.
4. Lumpkin, A. (2007) Introduction to Physical Education, Exercise Science and Sports Studies, McGraw Hill, New York, USA.
5. Siedentop, D. (2004) Introduction to Physical Education, Fitness and Sport, McGraw Hill Companies Inc., New York, USA.
6. Shaffer, D.R. (2002) Development Psychology: Childhood and Adolescence. Thomson, Sydney, Australia.
7. Shukla, (2000) Mother on Education, National Council of Teacher Education, New Delhi.
8. Singh, A. et al. (2000) Essential of Physical Education, Kalyani Publishers, Ludhiana, Punjab.
9. Wuest, D.A. & C.A. Bucher (2006) Foundation of Physical Education, Exercise Science, and Sports. McGraw Hill Companies Inc.; New York, USA.
10. Fahey, T.D., M.P. Insel and W.T. Rath (2006) Fit & Well: Core Concepts and Labs in Physical Fitness, McGraw Hill, New York.
11. Kansal, D.K. (2012) A Practical Approach to Test Measurement and Evaluation Sports and Spiritual Science Publication, New Delhi.

Full Marks-75 (60+15)

Credit Point -06
06

Total Lectures/Week-

- Objectives:
1. To appraise the knowledge of Fundamental Exercises.
 2. To appraise the knowledge of Marching, Calisthenics & Aerobics.

Unit 1. Fundamental Exercise

1. 1. Head, Neck and Facial Exercises
1. 2. Shoulder and Chest Exercises
1. 3. Abdominal, Hip and Trunk Exercises
1. 4. Upper arm, lower Arm, Wrist and Finger Exercises
1. 5. Thigh, Knee, Calf, Ankle and Finger Exercises

Unit 2. Marching

2. 1. Fall in, Attention, Stand at Ease, Eyes right – Eyes front (Dressing), Turning right, left & about.
2. 2. Marching: Arm-Leg coordination, Marching, Mark Time, Quick march, Halt, about turn while marching and marching with Salute.
2. 3. Dismissal

Unit 3. Free hand Exercise (CALISTHENICS & AEROBICS)

3. 1. Callisthenics – Two count, four count, eight count, sixteen count, thirty-two count
3. 2. Aerobics- Basic turns, jumps, leaps with Music

Unit 4. Apparatus Exercise

4. 1. Exercise with wands, dumbbell, hoops,
4. 2. Exercise with flags, clubs, bamboos

B.Voc in PE, Semester - I

ENG-AE-1012: English Communication

English Language Proficiency

Full Marks-25

Credit Point -02
02

Total Lectures/Week-

Course Content

1. Reading

Specific Objectives

The course aims to enable students to:

- read for the main idea of a text
- know the context of the text
- develop their overall comprehension skills

Teaching Points

- Thinking about the topic, predicting, personalizing the topic
- Reading for key terms
- Reading for the main idea
- Guessing meaning in context
- Skimming (overall idea)
- Scanning (specific information)
- Reading for gist
- Understanding context through language

Course Outcomes

After studying / completing the course the students will be able to comprehend a text meaningfully by:

- making predictions about a text
- relating to their life experiences to the topic of the text
- identifying the key terms in a text
- guessing meaning of the text in particular contexts
- reading for overall idea of the text and for specific information
- knowing the context of the text
- comprehending a text meaningfully

2. Writing

Specific Objectives

The course aims to enable students to:

- compose grammatical sentences
- write coherent paragraphs (various types and for various purposes)
- summarise texts
- use punctuation appropriately
- define terms with illustrations
- make notes

Teaching Points

- Making / Building sentences
- Generating ideas
- Paragraph building
- Punctuation
- Capitalization
- Writing expanded definitions
- Note taking
- Writing a summary
- Writing a listing paragraph
- Writing about differences
- Writing about changes

Outcomes

At the end of the course, the students will be able to:

- Generate ideas for focused writing
- Use punctuation accurately
- Write various types of paragraphs coherently
- Write summaries
- Define terms giving illustrations

GENERAL ELECTIVE: I
B.Voc in PE, Semester - I

PHE-VE-1016: Horizon of Exercise and Sports Science

Full marks: 75 (60 + 15)

Credit Point: 06

Total Lectures: 08

Objective: 1. To acquaint students with the historical and contemporary perspective of Physical Education and Sports Science

2. To acquaint students with history and fundamentals

Unit 1. Historical perspective of Physical Education

- 1.1. History of physical education in Ancient time. Greek, Rome, Athens, Sparta
- 1.2. Physical Education in ancient India Vedic epic and Buddhist periods
- 1.3. Physical Education during Pre and post-Independence period in India.

Unit 2. Introductions to Education and Physical Education

- 2.1. Meaning and definition of Education and Physical Education
- 2.2. Need, importance and scopes of Physical Education
- 2.3. Aims and objective of Physical education

Unit 3. Introductions to Sports Science and its Branches

- 3.1. Exercise and sports Physiology and practical application
- 3.2. Exercise and sports Biomechanics and practical application
- 3.3. Exercise and sports Psychology and practical application.
- 3.4. Professional aspects of Fitness Management, Sports Infrastructure Management and Sports Event Management.

Unit 4. Introduction to Social Science (Sport and Society)

- 4.1. Meaning and definition of sport sociology;
- 4.2. Socialization through games and sports;
- 4.3. Relationship between politics and sports;
- 4.4. Social Stratification and sports;

Unit 5. Olympic Movement

- 5.1. Ancient Olympic games
- 5.2. Modern Olympic Games
- 5.3. Revival of Modern Olympic Games,
- 5.4. Organization and conduct of Games and ceremonies (opening and closing ceremonies)

RECOMMENDED BOOKS

- 1. Kamlesh M.L., "Physical Education, Facts and foundations" Faridabad P.B. Publications.
- 2. Barrow Harold M., "Man and movements principles of Physical Education" 1978.
- 3. Ravanes R.S., "Foundation of Physical Education" Houghton Millin Co. Boston USA (1978)
- 4. Singh Ajmer et.al., "Essentials of Physical Education", Kalyani Publishers Ludhiana Second revised Addition 2008.
- 5. Deleh V.A., "World History of Physical Education", prentice Hall Inc.
- 6. Loy, Lohn W. Dr. and Kenyon, Gerald S. Sports Culture and Society (Philadelphia: The MacMillan Co. 1969).
- 7. Brailsford Dennis Sports and Society, (London- Routledge and Kegan Paul 1969).

SEMESTER-II

B.Voc in PE, Semester - II

PHE-VC-2016: HEALTH EDUCATION

Full Marks-75 (60+15)

Credit Point -06

Total Lectures/Week-06

- Objectives: 1. To appraise the knowledge of Health, fitness, wellness and first aid.
2. To appraise the knowledge of disabilities and rehabilitation.

- Unit.1. Health and Health Education
- 1.1. Health- Concept, definition and dimension.
 - 1.2. Health Education- Definition, aim, objectives.
 - 1.3. Principles of Health Education.
 - 1.4. Health Agencies- World Health Organization (WHO), United Nations Educational Scientific and Cultural Organization (UNESCO).
- Unit.2. Health Problems, Prevention and Control
- 2.1. Communicable Diseases- Malaria, Dengue and Chicken Pox.
 - 2.2. Non-communicable Diseases- Obesity, Diabetes and Hypertension.
 - 2.3. Occupational Health- Occupational Health Hazards and Diseases.
 - 2.4. Postural Deformities- Causes and corrective exercise of Kyphosis, Lordosis, Scoliosis, Knock Knees and Flat Foot.
- Unit.3. Physical Fitness and Wellness
- 3.1. Physical Fitness- Meaning, definition and Importance of Physical Fitness.
 - 3.2. Components of Physical Fitness- Health and Performance related Physical Fitness.
 - 3.3. Concept of Wellness. Relationship between Physical activities and Wellness.
 - 3.4. Ageing- Physical activities and its importance.
- Unit.4. First-aid and Sports Injuries
- 4.1. First aid- Meaning, definition and importance
 - 4.2. Golden rules of First-aid.
 - 4.3. Sports Injuries- Types and Causes.
 - 4.4. Definition, Types, Symptoms and Treatment of common sports injuries- Sprain, Strain, Fracture and Dislocation.
- Unit.5. Disability and Rehabilitation
- 5.1. Disability- Meaning, definition and Types.
 - 5.2. Causes of Disability.

- 5.3. Rehabilitation of Disability.
- 5.4. Physical activity for Disability.

4

RECOMMENDED BOOKS

1. Bucher, Charles A. "Administration of Health and Physical Education Programme".
2. Delbert, Oberteuffer, et. al." The School Health Education".
3. Ghosh, B.N. "Treaties of Hygiene and Public Health".
4. Hanlon, John J. "Principles of Public Health Administration" 2003.
5. Turner, C.E. "The School Health and Health Education".
6. Moss et. al. "Health Education" (National Education Association of U.T.A.).
7. Nemir A. "The School Health Education" (Harber and Brothers, New York).
8. Nutrition Encyclopedia, edited by Delores C.S. James, The Gale Group, Inc.
9. Boyd-Eaton S. et al (1989) The Stone Age Health Programme: Diet and Exercise as Nature Intended. Angus and Robertson.
10. Terras S. (1994) Stress, How Your Diet can Help: The Practical Guide to Positive Health Using Diet, Vitamins, Minerals, Herbs and Amino Acids, Thorons.

Full Marks-75 (60+15)

B.Voc in PE, Semester - II PHE-VC-2026: WEIGHT TRAINING Credit Point -06

Total Lectures/Week-12

- Objectives:
1. To appraise the knowledge of Weight training.
 2. To appraise the knowledge about fundamental movement.

Unit 1. WEIGHT TRAINING

4. 1. Introduction of the game and historical development with special reference to India.
4. 2. Difference between weight training, weight lifting and power lifting. Safety principle of weight training and introduction of the muscular system of the body.
4. 3. Orientation of students to weight lifting, Power lifting and best physique

Unit 2. Fundamental Skills: The following exercise covering the major groups of muscles are to be taught and performed using different types of muscle contraction, i.e. isometric and isotonic.

5. 1. Two arms curls	5. 6. Rise on toes (Heel Raise)	5. 10. Leg press	5. 15. Sit ups with weight
5. 2. Front press	5. 7. Straight arm pullover	5. 11. Wrist rolling	5. 16. Alternate press
5. 3. Press behind the neck	5. 8. Bent over, rowing	5. 12. Pronation and supination	5. 17. Sport running with weight
5. 4. Dead lift	5. 9. Bench press	5. 13. Trunk twisting	5. 18. Stepping on bench
5. 5. Quarter squat, Half squat and full squat		5. 14. Good morning exercise	5. 19. Jack knife
			5. 20. Lateral rise
			5. 21. Iron shoe exercise

Full Marks-25

B.Voc in PE, Semester - II ENV-AE-2012: ENVIRONMENTAL STUDIES Credit Point -02 02

Total Lectures/Week-

Unit1: Introduction to Environmental Studies

- Multidisciplinary nature of environmental studies;
- Scope and importance;
- Concept of sustainable development (3 lectures)

Unit 2: Ecosystems

•What is an ecosystem? Structure and function of ecosystem: Energy flow in an ecosystem: food chains,

food web and ecological succession. Case studies of the following ecosystems:

- a) Forest ecosystem
- b) Grassland ecosystem
- c) Aquatic ecosystems (ponds, streams, lakes, rivers)
- d) Mountain ecosystem

(7 lectures)

Unit 3: Biodiversity and Conservation

•Levels of biological diversity: genetic, species and ecosystem diversity; Biogeographic zones of India;

Biodiversity patterns and global biodiversity hot spots

- India as a mega-biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity: Habitat loss, poaching of wildlife, man- wildlife conflicts, biological invasions;

Conservation of biodiversity: In-situ and Ex situ conservation of biodiversity.

•Ecosystem and diversity services: Ecological, economic, social, ethical, aesthetic and informational value.

(6 lectures)

Suggested Readings:

1. Bharucha Erach : Text book on Environmental Studies, UGC, New Delhi
2. Carson, R 2002. Silent Spring. Houghton Mifflin Harcourt.
3. De A.K.: Environmental Chemistry, Wiley Eastern Ltd.
4. Kaushik Anubha and C.P.Kaushik : Perspective in Environmental Studies, New Age International
5. Rajagopalan, R. (2018). Environmental Studies. (3rd Edition) Oxford University Press
6. S. C. Santra (2011): Environmental Science, New Central Book Agency

B.Voc in PE, Semester - II
PE-VE-2016: HEALTH, FITNESS AND WELLNESS

Full Marks-75 (60+15)

Credit Point -06

Total

Lectures/Week-08

- Objectives:
1. To appraise the knowledge of Health, fitness & wellness.
 2. To appraise the practical knowledge about games & sports.

Theory

Unit 1. Health and its' dimension – Physical, Mental, Social and Spiritual.

Unit 2. Health related fitness – Body Composition, Cardiovascular Endurance, Muscular Strength, Muscular Endurance, Flexibility.

Unit 3. Performance related fitness – Speed, Power, Balance, Agility, Coordination and Reaction Time.

Unit 4. Concept and Components of Wellness.

Unit 5. Nutrition and Balanced Diet.

Practical

1. Fundamental Exercises and Traditional Sport
2. Gym Exercises
3. Volleyball

SEMESTER-III

B.Voc in PE, Semester - III

PHE-VC-3016: Anatomy and Exercise Physiology

Full Marks-75 (60+15)

Credit Point -06
06

Total Lectures/Week-

- Objectives:
1. To appraise the knowledge of anatomy and physiology.
 2. To appraise the knowledge of various organs and systems of the body.
 3. To appraise the knowledge about the effect of exercise and training on various systems.

- Unit 1. Basic of Anatomy Physiology and Exercise Physiology
1. 1. Meaning and definition
 1. 2. Brief history

- 1. 3. Importance
- 1. 4. Meaning and Concept of cell, tissue, organ and system
- 1. 5. Microscopic structure and function of cell
- 1. 6. Types structure and function of tissues

Unit 2. The Musculo-Skeletal System:

2.1. Skeletal System

- a. Meaning, different parts of human skeleton and their functions
- b. Types of Bones
- c. Structure and function of Bones
- d. Skeletal deformities
- e. Types Structure and function of joints
- f. Effect of exercise and training on skeletal system

2.2. Muscle

- a. Meaning, Types, Structure and functions
- b. Types and Mechanism of muscular contraction
- c. Muscle fiber types
- d. Effect of exercise and training on muscular system

Unit 3. Cardio-respiratory system:

3. 1. Basic anatomy of cardiovascular system

- a. Structure and function of heart
- b. Blood vessels – types and functions
- c. Blood composition and functions
- d. Blood circulation and cardiac cycle
- e. Heart rate, Stroke volume, Cardiac output etc
- f. Effect of exercise and training on Cardiovascular system

3.2. Basic anatomy of respiratory system.

- a. External respiration and cellular respiration
- b. Respiratory muscles

- c. Mechanics of breathing
- d. Vital capacity, Oxygen debt, Second wind, stitch, Lung capacity, tidal volume, Dead space etc.
- e. Effect of Exercise and training on respiratory system

Unit 4. Nervous system and Endocrine system:

4. 1. Division- structural -CNS and PNS,
functional- SNS and ANS

- a. NMJ, Synapse
- b. Neural control over muscular contraction
- c. Concept of Neuropsychology
- d. Effect of exercise and training on Nervous system 4. 2. Concept of endocrinology, Hormone
- a. Structure and function of various endocrine glands- Pituitary, Thyroid, Adrenal, Pancreas, sex gland etc
- b. Concept of Immune system
- c. Effect of exercise and training on endocrine system

Unit 5. Energy Environment and Training:

- 5. 1. Energy for muscular work,
- 5. 2. Physiological concepts of Physical fitness and its components
- 5. 3. Warming up, cooling down etc. 5. 4. Fatigue
- 5. 5. Acclimatization to heat and cold
- 5. 6. Altitude training

Practical:

- 1. Identification of major bones
- 2. Identification of major muscles
- 3. Measurement of Blood Pressure 4. Measurement of VO₂max
- 5. Measurement of Vital capacity

6. Estimation of Physical Fitness Index

Recommended Books

1. Pearce Evelyn (1973) Anatomy and Physiology for Nurses, Oxford University Press, Kolkata
2. CC Chatterjee Human Physiology, CBS Publishers & Distributors Pvt Ltd
3. McArdle WD, Katch FI, Katch VL. Essentials of Exercise Physiology 2nd ed Philadelphia: Lippincott Williams and Wilkins:2000
4. Fax EL. Sports Physiology. Tokyo: Holt Saunders; 1984.
5. Hill AV. Muscular Movement in man. New York: Mc Graw Hill Book Co;1927

B.Voc in PE, Semester - III

PHE-VC-3026: PSYCHO-SOCIAL ASPECT OF SPORTS

Full Marks-75 (60+15)

Credit Point -06
06

Total Lectures/Week-

Objectives:

1. To appraise the knowledge of Psychology and Sociology.
2. To appraise the knowledge of Learning, Personality, Motivation, Emotion & Sports.
3. To appraise the knowledge about the effect of exercise and training on various aspects of Psycho-sociology.

Unit 1. Introduction to Psycho-Social aspects of Sports

5. 1. Meaning and definition of Psychology, Educational Psychology, Sociology.

5. 2. Meaning, nature and scope of Sports Psychology and Sports Sociology.

- 5. 3. Psychological factors effecting sports performance.
- 5. 4. Need and importance of physical activities and sports in the modern society.
- 5. 5. Games and sports as man's cultural heritage.
- Unit 2. Development Psychology
 - 2.1. Individual Difference:
 - a. Meaning, definition and nature.
 - b. Meaning and definition of Heredity and Environment
 - c. Heredity and Environment and their influence on Individual Difference.
 - 2.2. Growth and Development:
 - a. Meaning and definition.
 - b. Stages of growth and development
 - c. Psycho-Sociological characteristics of different stages of growth and development.
- Unit 3. Learning Process
 - a. Meaning, definition, nature of learning & Principles of motor skill learning.
 - b. Theories and Principles of Laws of learning.
 - c. Learning Curve and it's implication in sports.
 - d. Transfer of learning: Meaning and types.
 - e. Factors effecting transfer of learning.
- Unit 4. Personality, Motivation and Emotion:
 - 4. 1. Personality:
 - a. Meaning, definition and nature.
 - b. Role of Physical activities and games and sports in the development of personality.
 - 4. 2. Motivation:
 - a. Meaning, definition, types and importance.
 - b. Meaning of motive, need, drive, incentive and achievement.
 - 4. 3. Emotion
 - a. Meaning, definition, nature and types of Emotion.
 - b. Meaning of Anxiety and its effect on sports performance.
- Unit 5. Sports and Society

5. 1. Socialization through games and sports.
5. 2. Sports as a social occurrence.
5. 3. Social stratification in sports.
5. 4. Sports and Women.
5. 5. Sports Politics and National/International Integration.

Recommended Books:

1. Buchar Charles A, "Foundations of Physical Education", 8th Ed., C. V. Mosby Co., St. Luis, 1978.
2. Cox, "Sports Psychology", Human Kinetics Publishers, Champaign, Illinois.
3. Kamlesh M. L, "Psychology in Physical Education and Sports", Metropolitan Book Co., New Delhi 1998.
4. Sharma S. R., "Sociological Foundation in Physical Education and Sports", Friends Publication, New Delhi.
5. Singh Kanwaljeet, "Sociology of Sports", Friends Publication, New Delhi.
6. Singh Bhupinder, "Sports Sociology – An Indian Perspective", Friends Publication, New Delhi.
7. Silva John M and Roberts, "Psychological Foundation of Sports", Human Kinetics Publishers, Champaign, Illinois.
8. Singh A, Gill J S, Bais J, Brar R S. and Rathee N K, "Essentials of Physical Education", Kalyani Publishers, Jalandhar, 2003.
9. Skinner Charles E., "Essentials of Educational Psychology", Asia Publishing House, New Delhi, 1961.
10. Talamini J. T. and Page C. H., "Sports and Society – an Anthology", Little Brown & Co., Boston, 1973.

B.Voc in PE, Semester - III
PHE-VC-3036: AQUATICS

Full Marks-75 (60+15)

Credit Point -06
12

Total Lectures/Week-

- Objectives:
1. To appraise the knowledge of Swimming.
 2. To appraise the knowledge of different strokes.
 3. To appraise the knowledge about water polo & diving.

Unit 1. Introduction:

- a. History development and organizations.
- b. Rules and their interpretations.
- c. Submerging, Jumping, Floating, Locomotion, Breathing.

Unit 2. Front crawl/Free style & Backstroke

- a. Front crawl/Free style: Body position, Horizontal and lateral body alignment, Breathing, Body roll. The arm stroke, the flutter kick, Coordination, Starts, Turns, Finishes of front crawl events.
- b. Backstroke: Introduction, Body position, Body roll. The arm action, Recovery, Breathing. Leg action, Coordination. The Start, the turns, Finishing in back stroke event.

Unit 3. Breast stroke & Butterfly stroke

- a. Breast stroke: Introduction, Arm action, Breathing, Recovery. Leg action (whip kick), Coordination, Breast stroke start, Breast stroke turn, The finishes of breast stroke events.
- b. Butterfly stroke: Introduction, Arm action, Leg action, Body position, Breathing, Dolphin kick, Coordination. The start, the turn, the finish of butterfly event.

Unit 4. Diving & Water polo

- a. Basic skills of Diving: Initial strokes – preparation – different types of diving.
- b. Water polo: Basic and Skills of Water polo – Throwing and passing the ball, receiving – Throwing methods. Interpretation of Rules and regulations of the game, Dimension of pool.

Unit 5. Warm up and basic training methods & Lifesaving

- a. Warm up and basic training methods: Means and methods of general and specific warm up and cool down, Effects of warm up and cool down means and methods for development of strength, flexibility, endurance, speed and coordinative abilities, Equipment used for development of various motor abilities of swimmer on land and water. Interpretation of FINA diving rules, Basic dives for novices.
- b. Lifesaving: Methods of life saving, Approach factors causes of drove C.P.R. Facilities and Safety measures: Maintenance of Pool and pool equipment, Chemical required for pool, Pool water test, Safety measures and hygiene rules, Common diseases and injures and their causes and prevention

B.Voc in PE, Semester - III

SE-3012: OFFICIATING IN GAMES AND SPORTS
or
MEASUREMENT & EVALUATION IN SPORTS

OFFICIATING IN GAMES AND SPORTS

Total Marks: 25

Total Credit: 2

Total

Lectures: 02

Unit 1. History, Organization, Competitions & Awards

- a. History: Historical Development of the Game/Sport at the National and International levels.
- b. Organization: National Bodies controlling the sport and their affiliated units. International bodies controlling the sport and their affiliated units.
- c. Major National and International competitions / Tournaments.
- d. National and International Awards

Unit 2. Rules & Regulations

- a. Rules, Officiating
- b. Procedures and their interpretations.
- c. Officiating Techniques.
- d. Layout and marking of play areas

Unit 3. Training

- a. Introduction to Sports Training.
- b. Meaning, definition, aim and characteristics.
- c. Basic Principles of Sports Training. Training methods and means for the development of motor abilities (strength, speed, endurance and flexibility).

d. Load dynamics (Principles of Training load, distribution of training load).
Basic concept of preparation of training schedules.

e. Planning. Short-term and long-term training plans. Periodization: types, contents.

Unit 4. Technique & Tactics

a. Techniques / Skills. Classification of Techniques/Skills.

b. Technical/Skill Training. Preparatory Exercise. Basic Exercise.
Supplementary Exercise.

c. Tactics and Strategy.

d. Different tactical concepts applicable to the game/sport. Tactical Training

Unit 5. Competition and Fitness

a. Competition. Meaning, type and merits of competition.

b. Main and build up competitions. Preparation for competition.

c. Evaluation General Fitness Tests.

d. Specific Fitness Tests. Performance & Skill Tests

RECOMMENDED BOOKS

1. Singh Hardayal - Science of Sports Training, DVS Publications, 1997.

2. Manilal K.P Planning in Sports, Sports Publication, 2008.

3. Bumpa Tudor O - Periodization: Theory and Methods of Training, Human Kinetics, 1999

4. A. K - Principles of Sports Training, Friends Publication (India), 2001.

B.Voc in PE, Semester - III
SE-3012: Or MEASUREMENT & EVALUATION IN SPORTS

Total Marks: 25

Total Credit: 2

Total

Lectures: 02

- | | |
|---------|--|
| Unit 1. | Introduction |
| a. | Concept of Test, Measurement & Evaluation. |
| b. | Classification of Test. |
| c. | Principles of Evaluation. |
| d. | Importance of Test, Measurement and Evaluation in Physical Education and Sports. |
| Unit 2. | Criteria of selecting Good Test |
| a. | Scientific Authenticity |
| b. | Administrative Feasibility |
| c. | Educational Application |
| d. | Norms |
| Unit 3. | Measurements of Body Compositions and Somatotype Assessment |
| a. | Body Mass Index (BMI)- Concept and method of measurement. |
| b. | Body Fat- Concept and method of measurement. |
| c. | Lean Body Mass (LBM)- Concept and method of measurement. |
| d. | Somatotype- Concept and method of measurement. |
| Unit 4. | Fitness Test |
| a. | Kraus-Weber Muscular Strength Test |
| b. | AAHPER Youth Fitness Test |
| c. | Queens College Step Test |
| d. | Harvard Step Test |
| Unit 5. | Sports Skill Test |
| a. | Lockhart and McPherson Badminton Skill Test. |

- b. Johnson Basketball Test Battery.
- c. McDonald Soccer Test.
- d. Brady Volleyball Test

REFERENCES

1. Authors Guide (2013) ACSM's Health Related Physical Fitness Assessment Manual, USA: ACSM Publications.
2. Collins, R.D., & Hodges P.B. (2001) A Comprehensive Guide to Sports Skills Tests and Measurement (2nd edition) Lanham: Scarecrow Press.
3. Cureton T.K. (1947) Physical Fitness Appraisal and Guidance, St. Louis: The C. Mosby Company.
4. Getchell B (1979) Physical Fitness A Way of Life, 2nd Edition New York.
5. John Wiley and Sons, Inc Jenson, Clayne R and Cynt ha, C. Hirst (1980) Measurement in Physical Education and Athletics, New York, Macmillan Publishing Co. Inc.
6. Kansal D.K. (1996), "Test and Measurement in Sports and Physical Education, New Delhi: DVS Publications.
7. Krishnamurthy (2007) Evaluation in Physical Education and Sports, New Delhi; Ajay Verma Publication.
8. Vivian H. Heyward (2005) Advance Fitness Assessment and Exercise Prescription, 3rd Edition, Dallas TX: The Cooper Institute for Aerobics Research.
9. Wilmore JH and Costill DL. (2005) Physiology of Sport and Exercise: 3rd Edition. Champaign IL: Human Kinetics.
10. Yobu, A (2010), Test, Measurement and Evaluation in Physical Education in Physical Education and Sports. New Delhi; Friends Publications

B.Voc in PE, Semester - III
PHE-VE-3016: LIFESTYLE MANAGEMENT
Theory & Practical

Total Marks: 75 (60+15)

Total Credit: 6 (4+2)
08

Total Lectures/Week:

Theory

- Unit 1. Use of Modern Gadgets: Musculoskeletal Problem and Exercise benefits
- Unit 2. Sedentary Life Style: Cardiorespiratory Weakness and Active Life Style

Unit 3.	Junk and Fast Food: Digestive and Excretory Dysfunction and Sport Habit
Unit 4.	Neuroendocrinological Problem and Regular Sport
Unit 5.	Exercise and Immune Function.
Practical	
1.	Aerobics
2.	Swimming/Badminton
3.	Basketball

B.Voc in PE, Semester - IV

PHE-VC-4016: Fitness and Wellness		
Total Marks: 75 (60+15)	Credit Point -06	Total
Lectures/Week-06		

Objectives:	1. To appraise the knowledge of fitness and wellness
	2. To appraise the evaluation of fitness
diseases	3. To appraise the prevention and curative concept of hypokinetic

Unit 1. Concept of Fitness and Wellness

- a. Meaning, Definition of Fitness and Wellness
- b. Aim and Objectives of Fitness and Wellness
- c. Importance and scope of fitness and wellness
- d. Modern concept of fitness and wellness

Unit 2. Fitness components

- a. Fitness-Types of fitness and components of fitness
- b. Health related fitness components
- c. Skill related fitness components
- d. Physical Activity and Health benefit

Unit 3. Standard Test to measure fitness components

- a. CR Endurance- Queens college step test, Harvard step test, Beep test, 12min Run & Walk test etc.
- b. Muscular strength- Muscular endurance- 1min sit up test,
Flexibility- sit & reach test
- c. Body composition
Speed- 50meter dash test, 100-meter sprint, 20meter dash test
Agility - 4X10meter shuttle run test, Illinois agility test
Power – Vertical jump test, Standing broad jump test
Kinesthetics ability
Reaction ability -
Coordinative ability

Unit 4. Fitness Wellness and Exercise

- a. Means and methods of developing fitness and wellness
- b. aerobic exercises – meaning, means and methods of developing aerobic fitness Anaerobic exercises - meaning, means and methods of developing anaerobic fitness
- c. Fitness in relation to weight training- free weight and additional weight

d. Concept of designing different fitness training program for different category people

Unit 5. Fitness Wellness and Hypokinetic diseases

a. Hypokinetic disease-

b. Obesity, Hypertension, High Blood pressure, Diabetes, Heart disease etc causes.

c. Sign & symptoms, prevention and management

d. BMI and fitness

e. Modern Life Style and Physical activity in relation to hypokinetic diseases

Recommended Books

1. SJ Brian (1997) Fitness and Health, 4th ed, Human Kinetics
2. Thygerson AL and Thygerson SM (2009), Fit to be Well, 2nd ed, Jones and Bartlett Publishers, Massachusetts
3. E Gordon and Golanty E (2004), Health and Fitness, 8th ed, Jones and Bartlett Publishers, Massachusetts
4. Health and Fitness for Life (2010), Human Kinetics
5. Kansal DK (2012), A Practical Approach to Test Measurement and Evaluation, SSS Publication, New Delhi

B.Voc in PE, Semester - IV

PHE-VC-4026: Track & Field

Total Marks: 75 (60+15)

Credit Point -06

Total

Lectures/Week-06

COURSE CONTENTS

Unit 1. Historical development of the throwing events at national and international levels.

Shot Put

- O'Brien Techniques: Grip, Stance, Glide, Release and Reserve.
- Ground Marking, Rules and Officiating.

Discus Throw

- Grip
- Stance
- Release
- Reserve

Javelin Throw

- Grip, Stance, release and Reserve
- Ground Marking

Interpretation of Rules and Officiating.

Unit 2. FUNDAMENTAL SKILLS

- Running : Starting techniques: Standing start, Crouch start and its variations, Proper use of blocks.
- Finishing Techniques: Run, Through, Forward lunging, Shoulder Shrug
- Ground Marking, Rules and Officiating
- Hurdles: Fundamental Skills- Starting, Clearance and Landing Techniques.
- Types of Hurdles
- Ground Marking and Officiating
- Relays: Fundamental Skills
- Various patterns of Baton Exchange
- Understanding of Relay Zones
- Ground Marking
- Interpretation of Rules and Officiating

Unit 3. Historical development of the jumping events at national and international levels.

Long Jump

- Hang Style: Approach Run, Take off, Flight in the air and Landing,
- Ground Marking, Rules and Officiating

High Jump (Straddle Roll)

- Approach Run,
- Take off
- Clearance over the bar.
- Landing

Triple Jump:

- Basic Skills
- Ground Marking
- Interpretation of Rules and Officiating

B.Voc in PE, Semester - IV
PHE-VC-4036: INDIGENOUS SPORTS

Practical

Total Marks: 75 (60+15)

Total Credit: 06

Total

Lectures: 12

KABADDI

Unit 1. Introduction of the game and historical development with special

reference to India.

Unit 2. Important tournaments held at National and International levels and distinguished personalities related to the game.

Unit 3. Fundamental skills

3.1. Skill in raiding –

3.1.1. Touching with hand

3.1.2. Various kicks

3.1.3. Crossing of Baulk line

3.1.4. Crossing of Bonus line

3.1.5. Luring the opponent to Catch

3.1.6. Pursuing

3.2. Skill of Holding the raider –

3.2.1. Various formations

3.2.2. Catching from particular position

3.2.3. Different catches

3.2.4. Luring the raider to take particular position so as to facilitate catching

3.2.5. Chain formation and techniques

3.3. Additional skill in raiding

3.3.1. Bringing the Antis into particular position

3.3.2. Escaping from various holds

3.3.3. Techniques escaping from various chain formation

3.3.4. Combined formations in offence

3.3.5. Combined formations in defence

3.4. Various lead up games

Unit 4. The Game

Unit 5. Rules and their interpretations and duties of officials

B.Voc in PE, Semester - IV
BSCHC-403: INDIGENOUS SPORTS

Total Marks: 75 (60+15)	Practical	
	Total Credit: 06	Total
	Lectures: 12	

KHO-KHO

Unit 1. Introduction of the game and historical development with special reference to India. Important tournaments held at National and International levels and distinguished personalities related to the game.

Unit 2. Fundamental skills: General skills of the game running, chasing dodging, faking etc.

Unit 3. Skills in chasing correct Kho-Kho, moving on the lanes, pursuing the runner, trapping the inactive runner, trapping the runner on heels, trapping on the pole, diving judgement in giving kho, rectification of foul.

Unit 4. Skills in running zig zag, single and double chain, ring play, rolling in the sides, dodging while facing and on the back fakes on the pole fake legs, body arm etc. combination of different skills.

Unit 5. The Game: Rules and their interpretations and duties of officials

B.Voc in PE, Semester - IV
SE-4012: Application of Information and Technology in Sports
or
Sports Technology

Total Marks: 25

Theory
Total Credit: 02
Lectures/Week: 02

Total

- Unit 1. Introduction to Information Technology
- a. Meaning and importance of information and communication technology (ICT).
 - b. Application of computer in Sports Technology
 - c. Fundamental components of computers (input, memory, output device etc.)
 - d. Definition of hardware, software
 - e. Concept of Internet
 - f. Uses of internet in sports science
 - g. Concept of e-mail and Google search engine
- Unit 2. Application of MS Word
- a. Introduction to MS Word
 - b. Creating file-folder, saving and opening new and old documents
 - c. Introduce Page layout, Insert and home menu bar
 - d. Concept of Page set up, paragraph alignment, inserting page number, graph footnote and notes, spelling and grammar check, printing option, Formatting, Editing features
 - e. Understanding table & graph
 - f. Application of Excel Programme in Sport Science
- Unit 3. Application of MS Excel
- a. Introduction to MS Excel
 - b. Creating, saving and opening spreadsheet
 - c. Fundamental formulas and function
 - d. Understanding graph and Chart
 - e. Application of Excel Programme in Sports Science
- Unit 4. Application of MS Power Point

- a. Introduction to MS Power point
- b. Application of Power Point in Sport Science
- c. Creating, saving and opening a ppt. file
- d. Understanding design, formatting editing, inserting, and slide show features
- e. Concept of graph, Table and Pictures

Unit 5. Computer Language

- a. Introduction on Computer languages – machine, high level language, compiler/interpreter, classification of programming language.
- b. Number system: Binary number, Decimal to Binary, Binary to Decimal, Decimal to Octal, Binary Addition/Subtraction/Multiplication
- c. Flowchart, Symbol of flowchart, Some flowchart of simple programme
- d. Codes: ASCII, EBCDIC, BCD,
- e. Full form of MICR, CMC7, OCR, Bar Code Recognition (Bar coding)

SE-4012: or SPORTS TECHNOLOGY

Total Marks: 25	Theory	Total
	Total Credit: 02	
	Lectures/Week: 02	

Unit 1. Introduction to Sports Technology

- a. History of Technology in Sports and its advancement, meaning, definition, advantages and principles of Sports Technology, purpose and applications of sports technology in different sports.

Unit 2. Instrumentation technology

- a. Definition and Principles of Instrumentation, Types of instrumentation in Sports, Sensor selection and application, Placement of sensors. Hawk eye Technology in Sports.

Unit 3. Sports Surfaces and Facilities

- a. Characteristics of Sports Surfaces, Specific Sports Surfaces for playfields, construction and installation of sports surfaces. Types of materials – synthetic, wood, polyurethane. Use of computer and software in human motion detection, Match Analysis and Coaching.

Unit 4. Apparel, Protection Equipment and Sports Implements

- a. Design and Mechanics of Sports Apparel, Running Shoes, Helmets and Mountaineering Equipment, Playing Equipment: Balls: Types, Materials and Advantages, Bat/Stick/ Racquets: Types, Materials and Advantages. Sports equipment with Nano technology, Advantages.

Unit 5. Training Gadgets

- a. Mechanism and Advantages of Cricket Bowling Machine, Basketball ball Feeder, Tennis Serving Machine and Volleyball Serving Machine Video Coverage: Types, Size, Capacity, Place and Position of Camera in Live coverage of sporting events.

Note: Students should be encouraged to design and manufacture improvised sports, Testing equipment in the laboratory/workshop and visit sports technology factory / sports goods manufacturers.

Recommended Books

1. Franz K. F. et. al., Editor, Routledge Handbook of Sports Technology and Engineering (Routledge, 2013)
2. Steve Hake, Editor, The Engineering of Sport (CRC Press, 1996)

3. Dixon, Sharon. The science and engineering of sport surfaces. Routledge, 2015.
4. Franz K. F. et. al., Editor The Impact of Technology on Sports II (CRC Press, 2007)
5. John Mongilo, (2001), "Nano Technology 101 "New York: Green wood publishing group.
6. Magdalinski, Tara. Sport, technology and the body: The nature of performance. Routledge, 2009.

B.Voc in PE, Semester – IV
PHE-VE-4016: EXERCISE AND SPORTS THERAPY
Theory & Practical

Total Marks: 75 (60+15)

Total Credit: 06

Total Lectures/Week: 08

Theory

- | | |
|---------|---|
| Unit 1. | Exercise, Sport and Quality of Sleep. |
| Unit 2. | Exercise, Sport and Stress Relief: Anxiety, Depression, Conflicts, Frustration etc. |
| Unit 3. | Exercise, Sport and Life Style Diseases: Obesity, Diabetes, Hyper Tension etc. |
| Unit 4. | Sports as a Socializing Force. |
| Unit 5. | Basic Concept of Sport Management: Budget, Tournament etc. |

Practical

- | | |
|----|------------|
| 1. | Gymnastics |
| 2. | Handball |
| 3. | Cricket |

B.Voc in PE, Semester – V
PHE-VC-5016: KINSIOLOGY
Theory & Practical

Total Marks: 75 (60+15)

Total Credit: 06

Total Lectures/Week: 06

- Unit 1. Introduction to Kinesiology
- a. Definition and meaning of Kinesiology
 - b. Aims and Objective of Kinesiology
 - c. Need and importance of Kinesiology in Physical Education and Sports
 - d. Kinesiological terminologies used in the human body
- Unit 2. Human body Movement
- a. Fundamental Movements, Axes and Planes, Classification of joints of the human body
 - b. Center of gravity and line of gravity and its application in sports
 - c. Classification of voluntary muscles according to their shapes, Properties of voluntary muscles
 - d. Types of muscular contraction
- Unit 3. Kinesiology of joints and Location and action of major muscles at joints
- a. Two-joint muscles
 - b. Roles in which muscles may act
 - i. Angle of Pull, All or none law, Reciprocal innervations
 - c. Location and action of major muscles at joints

i. Ankle, Knee, Hip, Wrist, Elbow, Shoulder

Unit 4. Application of mechanical concepts

a. CGS, FPS, MKS system, units of measurements and their fundamental concepts

b. Definition and types of motion, Newton's Laws of Motion, Analogues of Newton's Laws of Motion, Application of Laws to sports activities

c. Definition of Force, Magnitude of force, Direction of application of force, Application of force to sports activities

d. Definition of Stability and Equilibrium, Types of equilibrium, Factors affecting stability, principles of dynamic stability

Unit 5. Application of mechanical principles

a. Definition of lever, Types of lever, Function of Lever, Application of lever functions to human body

b. Work, Power, Energy

c. Mechanical analysis of Walking, Running, Jumping, Throwing, Pulling, Pushing

d. Application of Kinesiological principles in daily living activities

Practical

Full Marks: 10

Total Credit: 02

1. Demonstration of fundamental movements of major joints of upper and lower extremities.

2. Demonstration of common fundamental movements with reference to various axes and planes.

3. Location and action of major muscles of upper extremity

4. Location and action of major muscles of lower extremity.

5. Measurement of distance, displacement, speed, velocity, acceleration, momentum

6. Demonstration of lever system applied to human body.

RECOMMENDED BOOKS

1. Rasch Philip J and Burke Roger K, Kinesiology and Applied Anatomy, Lea Febiger, Philadelphia
2. Frost Robert, Applied Kinesiology, North Atlantic Books, Berkely, California
3. Goswami, Jogishwar, Basic Kinesiology: Essential Tips, Friends Publication, New Delhi
4. Scott, Text Book in Kinesiology, Friends Publication, New Delhi.
5. Rai, Ramesh, Biomechanics Mechanical Aspects of Human Motion, Agrim Publication, Mohali, Punjab
6. Hay, James G, The Biomechanics of Sports Techniques, Prentice Hall, Inc, Englewood Cliffs, New Jersey.

B.Voc in PE, Semester – V
PHE-VC-5026: BALL GAMES-I: FOOTBALL & VOLLEYBALL
Theory & Practical

Total Marks: 75 (60+15)

Total Credit: 06

Total Lectures/Week: 12

Practical

FOOTBALL

1. Introduction of the game and historical development with special reference to India.
2. Important tournaments held at National and International levels and distinguished personalities related to the game.
3. Fundamental skills:
 - 3.1. Kicks
 - 3.1.1. Kicking with the inside of the foot
 - 3.1.2. Kicking with the instep of the foot
 - 3.1.3. Kicking with the outer instep of the foot

- 3.1.4. Lifted kick
- 3.2. Trapping
 - 3.2.1. Trapping rolling ball – with the inside, sole and instep of the foot
 - 3.2.2. Trapping bouncing ball with the sole
- 3.3. Dribbling
 - 3.3.1. With the instep of the foot
 - 3.3.2. With the inside of the foot
 - 3.3.3. With the outer instep of the foot
- 3.4. Heading
 - 3.4.1. From standing
 - 3.4.2. From running
 - 3.4.3. From jumping
- 3.5. Throw-in
- 3.6. Feinting –
 - 3.6.1. With the lower limb
 - 3.6.2. With the upper part of the body
- 3.7. Tackling
 - 3.7.1. Simple tackling
 - 3.7.2. Slide tackling
- 3.8. Goal keeping
 - 3.8.1. Collection of balls
 - 3.8.2. Ball clearance – Kicking, throwing and deflecting
- 3.9. Receiving
 - 3.9.1. Receiving the bowling ball with the inside and outside of the foot and changing direction
 - 3.9.2. Receiving a flying ball with the inside, thy, chest and head.
- 4. Dribbling
 - 4.1. Controlled dribbling
 - 4.2. Fast dribbling

- 4.3. Straight dribbling
- 4.4. Zig-Zag dribbling
- 4.5. Dribbling 5. Heading
- 5.1. From running and jumping
- 5.2. Heading for long clearance
- 5.3. Downward heading
- 6. Rules and their interpretations and duties of officials

VOLLEYBALL

- 1. Introduction of the game and historical development with special reference to India.
- 2. Important tournaments held at National and International levels and distinguished personalities related to the game.
- 3. Fundamental skills:
 - 3.1. Player's stance – Receiving the ball & passing to the team mates
 - 3.1.1. The volley (Overhead pass)
 - 3.1.2. The Dig (Under hand pass)
 - 3.2. Service
 - 3.2.1. Under Arm service
 - 3.2.2. Side arm service
 - 3.2.3. Tennis service
 - 3.2.4. Round arm service 3.3. Spike
 - 3.3. Spike
 - 3.3.1. Straight arm spike
 - 3.3.2. Round arm spike
 - 3.4. Block
 - 3.4.1. Single block
- 4. Advanced Skills

- 4.1. Pass
 - 4.1.1. Back pass
 - 4.1.2. Back roll volley
 - 4.1.3. Back roll dig
 - 4.1.4. Jump and pass
 - 4.1.5. Side roll dig
- 4.2. Service
 - 4.2.1. Side arm floater
 - 4.2.2. Overhead floater
- 4.3. Spike
 - 4.3.1. Spiking cross court
 - 4.3.2. Spiking down the line
- 4.4. Block
 - 4.4.1. Double block
 - 4.4.2. Triple block
- 4.5. Dive
 - 4.5.1. Dive combined with dig (two handed)
 - 4.5.2. Dive combined with dig (one handed)
- 5. The Game
- 6. Rules and their interpretations and duties of officials.

B.Voc in PE, Semester – V
PHE-VDSE-5016: YOGA EDUCATION
Or ATHLETIC CARE & REHABILITATION
Theory & Practical

Total Marks: 75 (60+15)

Total Credit: 06

Total Lectures/Week: 06

DSE-I: YOGA EDUCATION

UNIT -1: Introduction and Trends of Yoga

- 1.1 Meaning and Definition of Yoga
- 1.2 History and Philosophical aspects of Yoga
- 1.3 Need and Importance of Yoga in Physical Education and Sports Science
- 1.4 Mission and vision of AYUSH System

UNIT -2: Methods of Yoga

- 2.1 Karma Yoga, Jnana Yoga, Bhakti Yoga and Raja Yoga
- 2.2 Steps of Hatha Yoga
- 2.3 Steps of Ashtanga Yoga
- 2.4 Yoga Therapy

UNIT –3: Means of Yogic Practices -I

- 3.1 Introduction to Prayer and Its Importance
- 3.2 Concept of Sthula and Sukshma Vyama
- 3.3 Concept and Practice of Surya Namaskar
- 3.4 Concept of Kriya, Types and Benefits of Kriya

UNIT–IV: Means of Yogic Practices -II

- 4.1 Concept of Asana, Types and Benefits of Asana

4.2 Concept of Pranayama, types and benefits of Pranayama

4.3 Concept and types of Mudra and Bandha

4.4 Concept of Meditation and its benefits

UNIT–V: Application of Yoga

5.1 Yoga for Health and Wellness

5.2 Yoga for Aged Population

5.3 Yoga for Elderly able population

5.4 Yoga for Elite Sports Persons

PHE-VDSE-5016: or ATHLETIC CARE & REHABILITATION

Total Marks: 75 (60+15)

Total Credit: 06

Total Lectures/Week: 06

Objectives: 1. To appraise the preventive and curative aspect of sports injuries.

2. To appraise the rehabilitative concept of sports injuries.

3. To explain the safety related issues in physical education and sports.

Unit-I

1 Introduction of Athletic Care and Rehabilitation

1.1. Meaning, history and Importance of athletic care and rehabilitation.

1.2. Principle of Prevention of Sports Injuries.

1.3. Role of the Trainer/Coach/Physical Education teacher in the prevention of Injury

UNIT-II

2 Types of Sports Injuries

2.1. Introduction, Sign and Symptoms, Characteristics, Factors and Treatment of the following sports injuries: Contusion, Laceration, Abrasion, Corn, Strain, Sprain, Hematoma, Fracture, Dislocation etc.

2.2. Importance of application of First aid.

2.3. Concept of PRICER.

UNIT-III

3 Physiotherapy

3.1. Meaning, Importance and Guiding principles of Physiotherapy.

3.2. Therapeutic modalities and their application and effects.

3.3. Cryotherapy, Hydrotherapy, Hot therapy, Electrotherapy.

UNIT-IV

4. Massage and Rehabilitation Exercise

4.1. Meaning, Brief History and Importance of Massage, Contraindication of Massage, Classification of Massage.

4.2. Meaning and importance of Rehabilitation exercises.

4.3. Classification of Rehabilitative/Therapeutic exercise.

UNIT-V

5. Posture & Corrective Physical Education

5.1. Meaning and Objectives of Corrective physical education.

5.2. Posture- Meaning, Types and values of Good Posture.

5.3. Drawbacks & causes of Bad posture. Posture test- Examination of Posture.

5.4. Meaning, Causes and Treatment of postural deformities: Kyphosis, Lordosis, Scoliosis, Flat foot, knock knee, Bow leg etc.

Recommended Books

1. Singh A et al (2016). Essential of Physical Education. Kalyani Publisher, New Delhi

PHE-VDSE-5026: RACKET SPORTS (ANY TWO)

Total Marks: 75 (60+15)

Total Credit: 06

Total Lectures/Week: 12

BADMINTON (1)

1. Introduction of the game and historical development with special reference to India.

2. Important tournaments held at National and International levels and distinguished personalities related to the game.
3. Fundamental skills
 - 3.1. Racket parts, racket grips, shuttle grips
 - 3.2. The basic stances
 - 3.3. The basic strokes
 - 3.4. Drills and lead up games
 - 3.5. Types of games – singles, doubles, including mixed doubles.
4. Rules and their interpretations and duties of the officials.
5. Games: Single and Doubles

TENNIS (2)

1. Introduction of the game and historical development with special reference to India.
2. Important tournaments held at National and International levels and distinguished personalities related to the game.
3. Fundamental skills
 - 3.1. Grips –
 - 3.1.1. Eastern forehand grip
 - 3.1.2. Eastern backhand grip
 - 3.1.3. Western grip
 - 3.1.4. Continental grip
 - 3.1.5. Chopper grip
 - 3.2. Stance and footwork
 - 3.3. Basic ground strokes
 - 3.3.1. Forehand drive
 - 3.3.2. Backhand drive
 - 3.4. Basic service
 - 3.5. Basic volley

- 3.6. Overhead volley
- 3.7. Chop and Spin
- 4. The Game: Single and Doubles
- 5. Rules and their interpretations and duties of officials

TABLE TENNIS (3)

1. History of the game

1.1. World history

1.2. Indian history

2. General rules of Table Tennis

2.1. Measurement

2.2. Equipment

2.3. Normal Playing Condition

2.4. Point Scoring

2.5. Fault (Example: Service Fault)

3 Basic skill

3.1. Grip of the racket: Shake Hand Grip / Pen Hold Grip

3.2. Stance position: Square Stance/Parallel Stance

3.3. Backhand push and service

3.4. Forehand push and service

3.5. Backhand chop

3.6. Forehand chop

3.7. Receive of the service with the help of push and chop both from forehand and backhand side

3.8. Practice all the skill with proper stance and movement

4 Advance skill

- 4.1. Backhand counter stroke with service
 - 4.2. Forehand counter stroke with service
 - 4.3. Fore hand top spin
 - 4.4. Back hand top spin
 - 4.5. Different types of spin service (Top Spin, Side Spin, Back Spin, etc.)
 - 4.6. Movement practice (known ball to unknown ball-with the help of different training drills/sequence practice)
5. Game practice: Single and Double

B.voc in PE, Semester – VI
PHE-VC-6016: SPORTS TRAINING
Theory & Practical
Lectures/Week: 06

Total Marks: 75 (60+15)

Total Credit: 06

Total

Unit- I: Introduction

- 1.1. Meaning and definition of Sports Training.
- 1.2. Aim of Sports Training.
- 1.3. Characteristics of Sports Training.
- 1.4. Principles of Sports Training.

Unit- II: Principle of Training and Conditioning

- 2.1. Warming up- Meaning, Types and Methods.
- 2.2. Cooling down- Meaning and Methods
- 2.3. Conditioning- Meaning and Principles.
- 2.4. Training Methods- Circuit Training, Interval Training, Weight Training.

Unit- III: Training Load and Adaptation

- 3.1 Training Load- Meaning, definition, types and factors of training load.
- 3.2 Components of training load.
- 3.3 Over Load- Meaning, causes, symptoms and tackling of over load.
- 3.4 Adaptation- Meaning and conditions of adaptation.

Unit- IV: Training Techniques

- 4.1 Strength- Means and methods of strength development.
- 4.2 Speed- Means and methods of speed development.
- 4.3 Endurance- Means and methods of endurance development.
- 4.4 Flexibility- Means and methods of flexibility development.

Unit- V: Periodization

- 5.1 Meaning and Definition
- 5.2 Types
- 5.3 Aim
- 5.4 Contents of different periods

Recommended Books

- 1. Bunn, J.N. (1998) Scientific Principles of Coaching, New Jersey Engle Wood Cliffs, Prentice Hall Inc.
- 2. Cart, E. Klafs & Daniel, D. Arnheim (1999) Modern Principles of Athletic Training St. Louis C. V. Mosphy Company.
- 3. Daniel, D. Arnheim (1991) Principles of Athletic Training, St. Luis, Mosby Year Book.
- 4. David R. Mottram (1996) Drugs in Sport, School of Pharmacy, Liverpool: John Moore University.
- 5. Gary, T. Moran (1997) – Cross Training for Sports, Canada : Human Kinetics Hardayal.

6. Singh (1991) Science of Sports Training, New Delhi, DVS Publications.
7. Jensen, C.R. & Fisher A.G. (2000) Scientific Basic of Athletic Conditioning, Philadelphia.
8. Ronald, P. Pfeiffer (1998) Concepts of Athletics Training 2nd Edition, London: Jones and Bartlett Publications.
9. Yograj Thani (2003), Sports Training, Delhi : Sports Publications

B.voc in PE, Semester – VI
PHE-VC-6026: BALL GAMES-II
Theory & Practical

Total Marks: 75 (60+15)

Total Credit: 06

Total Lectures/Week: 12

- Objectives: of basketball.
1. To provide information about history, rules and regulation of the game
 2. To prepare the subjects sound in technically and tactically.
 3. To provide information about the fitness components their tests and skill test in basketball.

Basketball

Unit-I

- 1.1. Introduction and History of the Game of Basketball.
- 1.2. International, National, State Bodies controlling the game.
- 1.3. International and National Competitions/Tournaments.
- 1.4. National and International Awards.

Unit-II

- 1.1. Rules and Regulation of the Game.
- 1.2. Officiating Techniques.
- 1.3. Layout and update marking of play area.

Unit-III

- 1.1. Basic techniques- Players Stance and Ball Handling. Passing and Receiving- Two & One Hand Chest Pass, Two & One Hand Bounce pass, Two handed Over head pass, Baseball Pass & Hook Pass. Two & One Hand Receiving, Receiving in Stationary, jumping

and Running.

1.2. Dribbling- Stationary Dribble, Moving Dribble, Start and Stop Dribble, High & Low Dribble, Reverse Dribble.

1.3. Shooting- Set Shot, Jump Shot, Lay-up shot. Pivoting, Rebounding, Screening & Cutting.

1.4. Defense- Defense the offensive player with ball and without ball.

Unit-IV

1.1. Tactics- Offensive tactics- Individual, group and team offence- Fast break, Set play, Motion Offence, Free-lance offence.

1.2. Defensive Tactics- On the ball defense and off the ball defense. Zone defense, Man-to-man defense and match up defense.

Unit-V

5.1. General fitness components and test.

5.2. Specific fitness components and tests.

5.3. Basketball skill test and performance test.

Recommended Books

1. Lindeburg FA (1967). How to Play and Tech Basketball. Association Press. New York.

2. Brittenham G (1996). Complete Conditioning for Basketball. Human Kinetics. USA.

3. D.K. Kansal (1996). Test and Measurement in Sports and Physical Education. D.V.S. Publications, New Delhi.

4. Hardy Singh (1993). Science of Sports Training. D.V.S. Publications, New Delhi.

CRICKET

1. Introduction

- Introduction of the game and historical development with special reference to India.

- Important tournaments held at National and International levels and distinguished personalities related to the game.

2. Generic topics

- The role of the coach, coaching philosophy, coaching styles and the process of teaching skills
- The Laws and Spirit of Cricket
- The relationship between the coach, player and his/her parents
- Safety and first aid for cricket-related injuries
- Introduction to fitness and the parameters of fitness
- Warm up, stretching and warm down procedures
- Goal setting in sport
- Effective management of a cricket practice session
- The process of learning sports skills - games versus traditional method

3. Cricket-specific topics

Batting basics with Specific Drills:

Grip

- Stance
- Back-lift
- Downswing
- Vertical and horizontal defensive and attacking shots
- Running between the wickets

Bowling basics with Specific Drills:

- Basic bowling action
- Pace bowling

- Spin bowling

Fielding basics:

- Catching
- Attacking and defensive fielding
- Throwing
- Wicket-keeping

Captaincy and Leadership

Responsibility of the captain

Players' conduct

Fair and unfair play

The Game

1. Rules, their interpretations and duties of officials.

HOCKEY

1. Introduction of the game and historical development with special reference to India.
2. Important tournaments held at National and International levels and distinguished personalities related to the game.
3. Fundamental skills
 - 3.1. Grip
 - 3.2. Skills
 - 3.2.1. Rolling the ball
 - 3.2.2. Dribbling
 - 3.2.3. Push
 - 3.2.4. Stopping
 - 3.2.5. Hit

- 3.2.6. Flick
- 3.2.7. Scoop
- 3.3. Passing – Forward Pass, Square Pass, Triangular Pass.
- 3.4. Drills and lead up game related with skill taught.
- 4. Advanced Skills
 - 4.1. Reverse hit, hitting on the wrong foot.
 - 4.2. Stopping the ball on the right, left side and stopping the ball in the air.
 - 4.3. Pushing the wrong foot
 - 4.4. Reverse Flick
 - 4.5. Dodging (through the legs, right and left)
 - 4.6. Tackling-front, right, left.
 - 4.7. Passing-through pass, diagonal pass, return pass
 - 4.8. common bully
- 5. Positional play in attack and defence
- 6. Rules and their interpretation

B.voc in PE, Semester – VI
PHE-VDSE-6016: SPORTS MANAGEMENT
or
SPORTS NUTRITION
Theory & Practical
Total Marks: 75 (60+15) Total Credit: 06
Total Lectures/Week: 06

SPORTS MANAGEMENT

UNIT I: Concept

- 1.1 Meaning and functions of Management
- 1.2 Concepts of Sports Management; Basic Principles and Processes of Sports Management
- 1.3 Human resource in sports and its application
- 1.4 Personnel Management: Personnel Policies - Role of Personnel Manager in organizations, Manpower Planning; Office management

UNIT II: Programme management

- 2.1 Management Guidelines for event management
- 2.2 Community based Sport Programs
- 2.3 Management in instruction Program – Competitive Sports
- 2.4 Facility Management- Indoor and Outdoor Facilities – Facilities for Disabled – Modern Trends in Facilities- Maintenance.

UNIT III: Finance management

- 3.1 Concept of finance management;
- 3.2 Sources of income - Concept of different sources of income.
- 3.3 Approved Items of Expenditure – Rules of utilization of Games Fund
- 3.4 Agencies and its Schemes: Sports Authority of India, Association of Indian Universities, Sports Control Board, Games advisory Committee, National and International Federation

UNIT IV: Budget

- 4.1 The basic ailment of budget, Definition of budget,
- 4.2 objectives of budget control, Different types of budget
- 4.3 Preparation and Administration of Budget
- 4.4 Preparation of cash budget for organizing match, tournament

UNIT V: Sports sponsorship, Marketing and contemporary concept

- 5.1 Sponsorship: Objectives and Process
- 5.2 Types of Sponsorship, preparation of sponsorship proposal
- 5.3 Sports Marketing – Consumer Behavior, Sports Management and Marketing Agencies;
- 5.4 Brand, professional league and related contemporary terminology

SPORTS NUTRITION

Unit I: Basics of Food and Nutrition

- 1. Meaning and definition of food, nutrition and balanced diet.
- 2. Classification and functions of food.
- 3. Nutrients and food groups.
- 4. Role of nutrition in health.

Unit II: Basics of Sports Nutrition

1. Meaning and definition of sports nutrition
2. Significance of nutrition in sports/athletic performance
3. Concept of Recommended Dietary Allowances (RDA). Factors affecting RDA
4. RDA of different macro and micro nutrients.

Unit III: Macro Nutrients

1. Carbohydrates: Definition, source, classification functions and dietary requirements.
2. Protein: Definition, source, classification, functions and dietary requirements.
3. Fat: Definition, source, classification, functions and dietary requirements.
4. Macro nutrients and sports performance

Unit IV: Micronutrients

1. Vitamins: Definition, classification, sources, RDA and functions
2. Minerals: Definition, classification, sources, RDA and functions.
3. Role of Vitamins in Sports performance.
4. Role of Minerals in Sports performance.

Unit V: Water

1. Water: Source, functions and requirements
2. Water balance and its regulation.
3. Water, electrolyte balance and its regulation.
4. Concept and application of sports drinks.

B.voc in PE, Semester – VI
PHE-VDSE-6026: COMBATIVE SPORTS
Theory & Practical

Total Marks: 75 (60+15)

Total Credit: 06

Total Lectures/Week: 12

Practical

JUDO (1)

1. Introduction of the game and historical development with special reference to India.
2. Important tournaments held at National and International levels and distinguished personalities related to the game.
3. Fundamental skills
 - 3.1. Rej (Salutation)
 - 3.1.1. Ritsurei (Salutation in standing position)
 - 3.1.2. Zarai (Salutation in the sitting position)
 - 3.2. How to wear Judo costume
 - 3.3. Kumi Kata (Methods of holding Judo costume)
 - 3.4. Shisei (Posture in Judo)
 - 3.5. Kuzushi (Act of disturbing the opponent posture)
 - 3.6. Tsukuri and kake(Preparatory action for attack)
 - 3.7. Ukemi (Break fall)
 - 3.7.1. Urhiro Ukemi (Rear break fall)
 - 3.7.2. Yoko Ukemi (Side break fall)
 - 3.7.3. Mae Ukemi (Front break fall)
 - 3.7.4. Mae mawari Ukemi (Front rolling break fall)
 - 3.8. Shin Tai (Advance or Retreat foot movement)
 - 3.8.1. Suri-ashi (Gliding foot)
 - 3.8.2. Tsugi-ashi (Following foot steps)
 - 3.8.3. Ayumi-ashi (Walking footsteps)

- 3.9. Tai Sabaki (Management of the Body)
- 3.10. Nage-waze (Throwing Techniques)
 - 3.10.1. Hiza Guruma (knee wheel)
 - 3.10.2. Sesae Tsurikomi-ashi (Drawing ankle throw)
 - 3.10.3. De-ashi-hari (Advance foot sweep)
 - 3.10.4. O Goshi (Major loin)
 - 3.10.5. Seoi-nage (Shoulder throw) – Ippon scionage and Morote Scionag.
- 3.11. Katama waze (Grappling Techniques)
 - 3.11.1. Kesa gatame (Scaff hold)
 - 3.11.2. Kata-gatame (Shoulder hold)
 - 3.11.3. Kami-shiho gatama (Locking of upper four quarters).
 - 3.11.4. Method of escaping from each hold
- 3.12. Lead up games
 - 3.12.1. Break fall relay (maximum number of falls from standing position in one-minute duration)
 - 3.12.2. Mae – mawriukemi relay relay (maximum number of falls in one-minute duration)
 - 3.12.3. Maximum number of shoulder throw in one minute.
 - 3.12.4. Maximum number of obstacles jumped while doing mae-mawri-ukemi.
- 4. Rules and their interpretations and duties of officials.
