

MANIPAL UNIVERSITY JAIPUR



**MANIPAL UNIVERSITY
JAIPUR**

SYLLABUS (I to VI Semester)

**BACHELOR OF PHYSICAL EDUCATION AND SPORTS (BPES)
(2023-2026)**

**DEPARTMENT OF ARTS MANIPAL
UNIVERSITY JAIPUR**

AT1101: Foundation of Physical Education and Sports- [3 1 0 4]

Introduction: Definition, aim and objectives of physical education, principles of physical education, relationship of physical education with general education, misconceptions regarding physical education, how physical education help to achieve the aim of education. **Philosophical aspect of Physical Education:** Meaning of philosophy, different philosophies applied to physical education- Idealism, Pragmatism, Realism, Naturalism, Existentialism and Materialism, implication of different philosophies for physical education and sports.

Biological Concept of Physical Education: Biological principles of physical education: growth and development- Meaning, difference, principles, and various stages; heredity and environment-various theories and its effect on growth and development; body types and its classification; sex differences; chronological, physiological and anatomical ages.

Sociological Foundation: Physical education & sports as a need of the society, sociological implications of physical education and sports, physical activities and sports as a cultural heritage, role of sports in national integration.

Psychological Foundation: Meaning, definition, scope and importance of psychology, meaning of learning, laws of learning, theories of learning (trial and error, conditioned reflex insight theory, learning by imitation), factor affecting learning, different stages and plateau.

References:

1. Kamlesh, M.L. (1988). Physical Education Facts and foundations, Faridabad: PB Publications.
2. Barrow Harold, M. (1993). Man and movements principles of Physical Education, Philadelphia: Lea and Febiger.
3. Ravanes, R.S. (1978). Foundation of Physical Education. Boston USA: Houghton Millin Co.
4. Krishana Murthy, V. and Paramesara Ram, N. (1990). Educational Dimensions of Physical Education, New Delhi: Print India.
5. Singh, Ajmer et.al. (2008). Essentials of Physical Education, Ludhiana: Second revised Addition, Kalyani Publishers.

AT1102: History of Physical Education and Sports- [3 1 0 4]

History of Physical Education in India in Ancient Period: Physical education in Indus valley civilization (3250BC–2500 BC), physical education in Vedic period (2500 BC–600 BC), physical education in early Hindu period (600 BC–320 AD), physical education in later Hindu period (320 AD–1000 AD), physical education in medieval period (100 AD–1757 AD).

History of Physical Education in Pre and Post- Independence Era in India: physical education during British period (till 1947), physical education in India after independence, Kothari commission and its recommendation, national policy on education (1986), important institutions of physical education, famous personalities in physical education and sports (P M Joseph, Ajmer Singh, Prof Karan Singh, Major Dhyanchand, Mr Ram Singh, Col. Rajyavardhan Singh Rathore AVSM, Padama Shri Krishna Poonia), National sports awards.

Physical Education worldwide: Rome, Germany, USA, Greece. **Olympic Movement:** Ancient Olympic movement, modern Olympic games: Olympic motto, governing body, Olympic torch and flag, opening ceremony, awards, closing ceremony, Asian games, commonwealth games, India's achievement in Olympic, national sports awards.

History of Various Games and Sports: History of kho-kho, kabaddi, basketball, hockey, football, volleyball and gymnastics; various tournaments at national level.

References:

1. Kamlesh, M.L. (1988). Physical Education Facts and foundations, Faridabad: P.B. Publications.
2. Barrow Harold, M. (1993). Man and movements principles of Physical Education, Philadelphia: Lea and Febiger.
3. Ravanes, R.S. (1978). Foundation of Physical Education, Boston USA: Houghton Millin Co.
4. Krishana Murthy, V. and Paramesara Ram, N. (1990). Educational Dimensions of Physical Education, New Delhi: Print India.
5. Singh, Ajmer et.al. (2008). Essentials of Physical Education, Ludhiana: Second revised Addition, Kalyani Publishers.

AT1103: Methods in Physical Education- [3 1 0 4]

Teaching methods: Meaning, scope and importance of teaching methods in physical education, Basic types of teaching methods, Factors affecting teaching methods. **Command:** Meaning and types of command (for beginner's, for advance groups, for large groups, for complicated exercises), techniques of commanding-counting, continuous counting, counting the beat, rhythmic counting, counting aloud, use of whistle, procession instruments and music.

Preliminary preparation: Personal preparation, technical preparation, steps of preparation. **Presentation techniques:** Orientation, verbal explanation, demonstration, explanation, discussion, supervision, evaluation, teaching aids and types of teaching aids, motion pictures, charts & diagrams, models and exhibitions, musical instruments and recording.

Class formation: Its values and types of class formation: a. Single line b. Double line c. File formation d. Semi-circle e. Circle formation f. Spoke g. Horse shoe h. L- shape i. Triangular j. Rectangular k. Double sided l. Three sided m. free formation.

Supervision and inspection of teaching methods: Methods of supervision and qualities of a supervisor, evaluation of teaching methods, need and importance of evaluation. **Tournament Organization:** Conduct of tournaments and athletic meet, types of tournaments i. Elimination (knockout). ii. League. iii. Combination.

References:

1. Kamallesh, M.L. and Sangral, M.S. (1986). Methods in Physical Education, Ludhiana: Parkash Brothers 56 Books Market.
2. Kazmer, H.C. and Cassidy, R. (1958). Methods in Physical Education, London: W.B. Saunders and Co. Philadelphia.
3. Charrles, E. Forrythe and Irrn A. Keller. (1979). Administration of High School Athletics, Prentice Hall Inc. Englewood, N.J.

LN1106: Communicative English- [2 0 0 2]

Communication- Definition, Process, Types, Flow, Modes, Barriers; Types of Sentences; Modal Auxiliaries; Tenses and its Usage; Voice; Reported Speech; Articles; Subject-Verb Agreement; Spotting Errors; Synonyms and Antonyms; One Word Substitution; Reading Comprehension; Précis Writing; Essay Writing; Formal Letter Writing; Email Etiquettes; Résumé & Curriculum Vitae; Statement of Purpose; Presentations.

References:

1. Collins English Usage. Harpers Collins, 2012.
2. Hobson, Archie Ed. The Oxford Dictionary of Difficult Words. Oxford, 2004.
3. Jones, Daniel. English Pronouncing Dictionary. ELBS, 2011.
4. Krishnaswamy, N. Modern English: A Book of Grammar Usage and Composition, Macmillan India, 2015.
5. Longman Dictionary of Contemporary English. Pearson, 2008.
6. McCarthy, M. English Idioms in Use. Cambridge UP, 2002.
7. Mishra, S. and C. Muralikrishna. Communication Skills for Engineers. Pearson, 2004.
8. Oxford Dictionary of English. Oxford UP, 2012.
9. Turton, N. D. and J.B. Heaton. Longman Dictionary of Common Errors. Pearson, 2004.

LN1130: Language Lab- [0 0 2 1]

Listening: Listening Audio/Video Podcasts; Listening and typing –Listening and sequencing of sentences; Fill in the blanks – Listening and answering the questions; **Speaking:** Practice of IPA Sounds & Symbols; Practice of Consonants; Diphthongs and Monophthongs; Intonation – Ear Training; Learning Correct Pronunciation and sound recognition exercises; Common Errors in English; **Reading:** Fill in the blanks; Vocabulary building; reading and answering questions; **Conversations:** Face to Face Conversation; Telephonic conversation; Situational dialogues; Role play activities (Students take on roles and engage in conversation); Describing objects/Situations /People.

References:

1. Beatty, Ken. LEAP Advanced Listening and Speaking. Pearson, 2013.
2. Collins English Usage. Harpers Collins, 2012.
3. Craven, Miles, et al. Cambridge English Skills: Real Listening and Speaking. Cambridge UP, 2008.
4. Gude, Kathy. Advanced Listening and Speaking: Advanced (CAE) Student's Book with Key. Oxford,

2006.

5. Hobson, Archie Ed. The Oxford Dictionary of Difficult Words. Oxford, 2004.
6. Jones, Daniel. English Pronouncing Dictionary. ELBS, 2011.
7. Kumar, E. Suresh, and P. Sreehari. A Handbook for English Language Laboratories. Foundation Books.
8. Bauer, L. An Introduction to International Varieties of English. Edinburgh UP, 2002.
9. Longman Dictionary of Contemporary English. Pearson, 2008.
10. Mandal S. K. Effective Communication & Public Speaking. Jaico Publishing House.
11. Mohan, Krishna and N. P. Singh. Speaking English Effectively. Mac Millan Publishers.
12. Pushplata and Sanjay Kumar. Communicate or Collapse: A Handbook of Effective Public Speaking, Group Discussions and Interviews. Prentice-Hall of India.
13. Taylor, Grant. English Conversation Practice. Tata McGraw Hill.

CY1003: Environmental Science- [2 1 0 3]

Introduction- Multidisciplinary Nature of Environmental Studies, Scope and importance, concept of sustainability and sustainable development **Ecosystems-** Concept, structure and function, energy flow in an ecosystem, food chain, food webs and ecological succession, examples. **Natural Resources (Renewable & Non Renewable Resources)-** Land Resources and land use change, Land degradation, soil erosion and desertification; Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state). Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies **Biodiversity And Conservation-** Levels, Biogeographic zones, Biodiversity patterns and hot spots, India as a mega-biodiversity nation; Endangered and endemic species, threats, conservation, biodiversity services **Environmental Pollution-** type, causes, effects, and controls of Air, Water, Soil and Noise pollution, Nuclear hazards and human health risks, ill effects of fireworks, Solid waste management, case studies **Environmental Policies & Practices-** Climate change, global warming, ozone layer depletion, acid rain, Environment laws, International agreements, nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context **Human Communities and the Environment-** Human population growth, human health and welfare, Resettlement and rehabilitation, case studies, Disaster management, Environmental ethics, Environmental communication and public awareness, case studies, Field work and visit.

References:

1. Rajagopalan, R., Environmental Studies: From Crisis to Cure, Oxford University Press, 2016.
2. De, A. K. Environmental Studies, New Age International Publishers, New Delhi, 2007.
3. Bharucha, E., Text book of Environmental Studies for undergraduate courses, Universities Press, Hyderabad, 2nd Edition, 2013.
4. Gadgil, M., & Guha, R. This Fissured Land: An Ecological History of India. Univ. of California, Press, 1993.
5. Carson, R. Silent Spring. Houghton Mifflin Harcourt, 2002.
6. Groom, Martha J., Gary, K. Meffe, and Carl Ronald Carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006.
7. Singh, J.S., Singh, S.P., Gupta, S.R. Ecology, Environmental Science and conservation. S. Chand Publishing, New Delhi, 2014.
8. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). Conservation Biology: Voices from the Tropics. John Wiley & Sons, 2013.

CA1170: Fundamentals of Computer- [1 1 0 2]

Computer Fundamentals, Definition and Purpose, Data, Information and Knowledge, Characteristics of Computers, Classification of Computers, Generations of Computer, Basic organization of Computer, System Software and Application Software. Operating Systems and Multimedia, Types of Operating System, Windows v/s Linux, Mobile based OS, Multimedia, Definition and Types, Multimedia Software, Computer Networks, Applications of Networking, Network Topologies- Mesh, Bus, Star, Ring, Types of Network (LAN, MAN, WAN), Network Cables- Optical Fiber, Twisted, Co-axial, Network Devices- Hubs, Switch, Router, Network Interface Card, Ethernet, Internet, Introduction and Usage of Internet, Internet Connectivity Options (Wired and Wireless), IP Addressing and DNS, Website, URL, HTML, Web Browser and Search Engines, Operational Guideline of Computer Usage, Do's and Don'ts of Computer, Emails,

Email Etiquettes, Cyber Security, Internet Frauds, Secure Password Formation , Computer Security, Malware, Virus, Ransomware, Social Media and its Impact.

References:

1. Reema Thareja, Fundamental of Computer , Oxford Publications, 2014.
2. Kahate Atul, Information Technology, Tata McGraw Hill Publication, 2008.

SEMESTER-II

AT1201: Anatomy and Physiology- [3 1 0 4]

Introduction: Meaning and definition of anatomy and physiology; need and importance in physical education and sports; Structure & function of Cell, Tissue & its types. Skeletal and Muscular System: General structure of bone, classification, and functions of the bone, joints their structure and classification, various types of muscle and their functions, microscopic structure of skeletal muscle.

Cardiovascular and Respiratory System: Organs of cardiovascular and respiratory system and their structure, mechanism of blood circulation and respiration, blood pressure, cardiac output, cardiac cycle, heart rate, pulse rate and athlete's heart, vital capacity, tidal volume, dead space, oxygen debt and second wind

Nervous and Endocrine System: Parts of the brain, their structure and function, Spinal cord its structure and function, structure of neuron and its types, reflex action and reflex arch, structure, and function of various types of endocrine glands and their location.

Excretory and Digestive System: Structure and function of kidney, urinary tract and skin, microscopic structure of nephron-mechanism of urinary excretion, structure of digestive tract, mechanism of digestion, elements of food, digestion of food, action of various enzymes on food, assimilation and absorption of food, various glands of digestive system, their structure, and functions.

References:

1. Pearc, E. (1989). Anatomy and Physiology for Nurses, Delhi Oxford University Press.
2. Parrot, J.W. (1973). Anatomy for the students and Teachers of Physical Education, London: Edward Arnold Ltd.
3. Miller, A. and Leavel L.C, (1973). Anatomy and Physiology, New York: Amerind Publishing Co. Pvt. Ltd.
4. Singh Ajmer et.al. (2008). Essentials of Physical Education Ludhiana: Kalyani Publishers.
5. Fox, E.L. (1989). Physiological Basis of Physical Education, Athletic Brown Publication.
6. McArdle, William D., Katch, Frank L. and Katch, Victor L. (2014). Exercise Physiology: Nutrition, Energy and Human Performance. Eighth Edition. Lippincott Williams and Wilkins. Wolters Kluwer Company.
7. Pandey, P. K. (1989). Know how sports medicine. Jalandhar: A.P. Publisher.

AT1202: Sports Psychology- [3 1 0 4]

Introduction of Sports Psychology: Meaning, definition, scope and importance of sports psychology, development of sports psychology in India, psychological factors effecting physical performance, role of sports psychology in the field of physical education and sports.

Growth and Development: Concept of growth and development: Physical, mental, social, intellectual and emotional development in infancy, later childhood and adolescence stages. Motivation in Sports: Meaning and definition of motivation need and drive, types of motivation, developing motivation and self-confidence, goal setting and motivation.

Personality: Meaning and definition of personality, theories of personality, factors affecting personality development, role of physical education and sports in the development of personality.

Anxiety and Stress: Sources of anxiety and stress, emotional states and their effect on performance, dimensions and theories of aggression (biological and psychosocial), factors promoting aggression, aggression and violence in sports.

References:

1. Kamlesh M.L. (1983). Psychology of Physical Education and sports, New Delhi: Metropolitan Book Co. (P) Ltd.
2. Cox, Richard H. (2002). Sport Psychology: Concepts and Applications. 5th Edition, illustrated. McGraw-Hill.
3. Sharma, Y.P. (2000). Psychology in Physical Education and sports, New Delhi: Reliance Publishing House.
4. Singh Ajmer et.al, (2008). Essentials of Physical Education, Ludhiana: Kalyani Publishers Second revised

addition.

AT1203: Recreation and Camping- [3 1 0 4]

Introduction to Recreation: Meaning, Definitions and Characteristics of Recreation, Importance of Recreation, Misconceptions about Recreation, Scope of Recreation. Recreation in Social Institution: Family, Educational institutions, Community/ Culture, Religious organization.

Programmes in Recreation: Criteria of selecting a programme, Principles of selecting a programme, Classification of recreational activities (Indoor and outdoor activities, Water activities, Cultural activities, Adventure activities, Social events, Literary activities), Hobbies- Introduction to hobbies and types of hobbies, Agencies providing Recreation.

Planning for Recreation: Planning criteria of Recreational facilities, Objectives of Recreational facilities, Different types of indoor and outdoor recreation for rural population, Different types of indoor and outdoor recreation for urban population, Operation of different recreation areas and facilities, Maintenance of different recreation areas and facilities, Sources of Funding of recreational activities.

Camping: Definition of Camps, Types of Camps, Importance of Camping in Physical Education, Selection and layout of campsites, organization and administration of camps, camp programmes and activities, Evaluation of camp work.

References:

1. John T. Haworth and A.J. Veal. (2004), "Work and Leisure"
2. Amy R Hurd and Denise M. Anderson (2010), "The Park and Recreation Professional's Handbook"
3. Doyice J Cotton and John Wolohan (2016), "Law for Recreation and Sports Manager"
4. Chris Gratton and Peter Taylor, (2000), "Economics of Sport and Recreation: An Economic Analysis"
5. John T. Haworth (2006) "Work, Leisure and Well-Being"
6. Frances Stavola Daly and Robin Ann kunstler (2010), "Therapeutic Recreation Leadership and Programming"
7. Brar R.S., Joshi R., Gill M., Kanwar S. (2012). "Fundamentals of Physical Education". Kalyani Publishers, New Delhi.
8. Singh Ajmer et.al, (2017) "Essentials of Physical Education", Kalyani Publishers Ludhiana.

AT1271: Value Education- [2 0 0 2]

Meaning of Value, Meaning of Education, Meaning of Value Education, Classification of Values, The Need and Role of Professional Ethics, Understanding Value Education, Self-Exploration as the Process for Value Education, The Basic Human Aspirations - Continuous Happiness and Prosperity, The Program to fulfil Basic Human Aspirations, Understanding the Harmony at Various Levels: Understanding the Human Being as Co-existence of Self ('I') and Body, Harmony in the Self ('I'), Understanding oneself, Harmony with the Body, Harmony with the Family, Harmony in the Society, Harmony in Nature, Harmony in Existence.

References:

1. Gaur, R. R. (2010). A Foundation Course in Human Values and Professional Ethics: Presenting a Universal Approach to Value Education through Self-exploration. New Delhi: Excel Books.
2. Naagarazan, Dr. R S. (2016). A Textbook on Professional Ethics and Human Values: New Delhi: New Age International Pvt Ltd.

LN1207: Reading Language through Literature- [1 1 0 2]

Vocabulary: Word Formation; **Grammar and Usage:** Prepositions; Determiners; Non-Finite Verbs; Clauses; Types of Sentences- Simple, Compound, & Complex; **Comprehension:** Nissim Ezekiel- "Night of the Scorpion" Rudyard Kipling- "If"; E.V. Lucas- "Third Thoughts"; Francis Bacon- "Of Studies"; George Orwell- Animal Farm; A.P.J Abdul Kalam- Vision for 2020; **Compositional Skills:** Review Writing; Paragraph Writing; Report Writing.

References:

1. Collins English Usage. Harpers Collins, 2012.
2. Hobson, Archie Ed. The Oxford Dictionary of Difficult Words. Oxford, 2004.
3. Jain, Jasbir. The Many Worlds of Literature. Trinity P. 2016.
4. Krishnaswamy, N. Modern English: A Book of Grammar Usage and Composition, Macmillan India, 2015.
5. Longman Dictionary of Contemporary English. Pearson, 2018.
6. Oxford Dictionary of English. Oxford UP, 2012.
7. Sasikumar, V., Dutta and Rajeevan, A Course in Listening and Speaking –I Foundation Books. 2015.

LN1230: Language Lab-II- [0 0 2 1]

Speaking skills: Self-Introduction; Compering; Welcome Address; Vote of Thanks; Extempore; Developing Speaking Skills: Words Commonly Mis-spelt and Mis-pronounced; Vocabulary Building; Interviewing others by asking Questions; Information Transfer; Debate; Giving Directions; Soft Skills: Telephonic Interviews; Job Interviews; Group Discussions; Seminar Presentations

References:

1. Beatty, Ken. LEAP Advanced Listening and Speaking. Pearson, 2013.
2. Craven, Miles, et al. Cambridge English Skills: Real Listening and Speaking. Cambridge UP, 2018.
3. Hobson, Archie Ed. The Oxford Dictionary of Difficult Words. Oxford, 2014.
4. Jones, Daniel. English Pronouncing Dictionary. ELBS, 2011.
5. L Bauer. An Introduction to International Varieties of English. Edinburgh UP, 2012.
6. Longman Dictionary of Contemporary English. Pearson, 2018.
7. Mohan, Krishna and N. P. Singh. Speaking English Effectively. Mac Millan Publishers

AT1230: Training to Basic Exercises- [0 0 4 2]

- a. Mass Demonstration (Marching)- Demonstration, explanation, and practice.
- b. Fundamental movements and basic exercises- Demonstration, explanation, and practice. Five lessons on each of the following: -
 - a) Calisthenics / Mass P.T. / Table exercises
 - b) Light Apparatus- Dumb-bell / Lezium / Hoop / Umbrella / Wands

SEMESTER-III

AT2101: Exercise Physiology- [3 1 0 4]

Functional Adaptations to Exercise- Hormonal control during exercise, Exercise and neuromuscular system, Metabolic adaptations to exercise, Cardio-respiratory changes, Effects of exercise and training on health and fitness.

Energy Continuum and Recovery Process- Metabolism and exercise, Recovery from exercise, Replenishment of energy stores during recovery process, Removal of excess lactic acid produced during exercise, Restoration of myoglobin oxygen stores.

Exercise in hot and cold environment- Body temperature regulations, Physiological responses to exercise in the heat, Acclimatization to exercise in heat, Physiological responses to exercise in cold, Health risks during exercise in the cold.

Altitude and physiology- Exercise performance at altitude, Physiological responses to acute altitude exposure, Chronic altitude exposure and acclimatization Aging process and Ergogenics, Age related changes and exercise, Ergogenic aids and physical activity.

References:

1. W. Larry Kenney, Jack H. Wilmore, David L. Costill, 2012, Physiology of Sports and Exercises.
2. Robert A. Robergs, Scott O. Roberts, 2000, Fundamental Principles of Exercise Physiology for Fitness, Performance, and Health.
3. Larry G. Shaver, 1982, Essentials of Exercise Physiology.
4. Dr. Sandhya Tiwari, 2006, Exercise Physiology.
5. M. Dena Gardiner, 1985, The Principles of Exercise Therapy.
6. Edward L. Fox, Richard W. Bowers, Merle L. Foss, 1981, The Physiological Basis of Physical Education and Athletics.
7. Michael S. Bahrke, Charles E. Yesalis, 2002, Performance – Enhancing Substances in Sport and Exercises.

AT2102: Kinesiology- [3 1 0 4]

Kinesiology: Meaning, Aims, Objectives and Scope of Kinesiology, Need and Importance of Kinesiology in Physical Education, Application of Kinesiology in the field of Physical Education and Sports.

Planes and Axis: Meaning of Planes and Axis. Types of Planes and Axis found in human body. **Fundamental concepts:** Centre of Gravity, Equilibrium, Line of Gravity, All or none law, Angle of pull, Reciprocal Inhibition

and Reciprocal Innervation.

Human Joints and Movement: Joint and Types of Joints. Various Fundamental Movements. Movements around various Joints: a. Neck b. Shoulder c. Elbow d. Wrist e. Hip f. Ankle.

Skeletal Muscle; Structural Classification of Skeletal Muscles. Roles of Skeletal Muscles: a. Agonist, b. Antagonist, c. Stabilizer, d. Neutralizer. Location, Origin, Insertion and Action of Muscles: a. Deltoid, b. Biceps, c. Triceps, d. Latissimus Dorsi, e. Trapezius Major, f. Sternocleidomastoid, g. Pectoralis major, h. Rectus Abdomens, i. Quadriceps, j. Hamstring, k. Sartorius, l. Gastrocnemius. **Muscle contraction:** Meaning and Types of Muscle Contraction (Isotonic, Isometric, and Isokinetic).

References:

1. Bindal, V. D. (2018). Textbook of Kinesiology. Macmillan Publishers.
2. Cooper and Cleese, 1968 "Kinesiology" St. Louis C.V. Mosby Co.
3. De, J. M. E. (2016). Kinesiology: The Skeletal System and Muscle Function (3rd ed.). Mosby.
4. Floyd, R., & Thompson, C. (2017). Manual of Structural Kinesiology (20th ed.). McGraw-Hill Education.
5. Deiels, L. and Worthington, C., 1956 Muscle Testing Techniques of Manual Examination, Lousion W.B. Esundeus Com
6. Rasch, P.I. and Burke R.K., 1963 "Kinesiology and Applied Anatomy" Lee and Febiger.
7. Singh Ajmer et.al, 2008 "Essentials of Physical Education", Kalyani Publishers Ludhiana Second revised addition.
8. Smith Lara K. and Others, 1982 "Srunnstrem's Clinical kinesiology" Jaypee Brothers P.B. No-7193 New Delhi.
9. Wells K., 1986 "Kinesiology" Philadelphia W.B. Saunders Co.

AT2103: Tests, Measurement and Evaluation- [3 1 0 4]

Tests, Measurements and Evaluation; Meaning and Definition of Test, Measurement and Evaluation, Need and Importance of measurement and evaluation in Physical Education and Sports, Criteria of test selection (validity, reliability, objectivity and norms), Administration of Test (pretest, testing and posttest duties), Order of tests.

Classification of Test; Standardized tests (Objective and Subjective test), Construction of test, Knowledge tests (Written and Skill tests). **Measurement of Body Composition;** Methods (Hydrostatic Weighing, Air Displacement Plethysmography, Dual-Energy X-Ray Absorptiometry, Skinfold Method, Bioelectrical impedance analysis).

Measurement of Cardiorespiratory Endurance; Measuring Maximal Oxygen Consumption, Cooper's 12 minute continuous run / walk test, Harvard step test and its modification. **Measurement of Muscular-skeletal fitness;** Muscular Strength and Endurance (Static strength- handgrip dynamometer, back and leg dynamometer, Dynamic strength- 1-RM strength tests for upper body and lower body, Pull-Up Test, Push-Up Tests, Sit up Test), Flexibility (Goniometer, Sit-and-Reach Test, Modified Sit-and-Reach Test)

Power (Vertical Jump Test, Standing Long Jump, Medicine Ball Throw); **Speed** (10-Yard/ 40-Yard Sprint Test, 60-Yard Sprint With Flying start); **Agility** (5-10-5 Test, T-TEST, Hexagon Test);

Sports Skill Tests; Volleyball (Brady test, Russell and Lange test), Basketball (Johnson test), Soccer (Mc Donald test, Johnson test) Hockey (Harbans Singh field Hockey test), Badminton (Miller test).

References

1. Heyward, V.H., Gibson, A.L. (2014). "Advanced fitness assessment and exercise prescription-Seventh edition", Human Kinetics, Champaign, IL.
2. Morrow, J. R., Mood, D.P., Disch, J. G., Kang, M. (2016). "Measurement and Evaluation in Human Performance- 5th edition", Human Kinetics, Champaign, IL.
3. Fukuda, D.H. (2019). "Assessments for sport and athletic performance", Human Kinetics, Champaign, IL.
4. Clarks H. Harrison, 1976 "Application of measurement to health and Physical Education" Pretice Hall Inc., Englewood Cliffs, N.J. 5th Edition.
5. Kansal, D.K., 1996 "Test and measurement in sports and physical education" New Delhi: D.V.S. Publications.
6. Mayer J.C, "Tests and Measurements in health and Physical Education", Appleton Century Crafts, Inc. Third Edition.
7. Sodhi, H.S., & Sidhu, L.S., 1984 "Physique and selection of sports- a kinanthropometric study" Patiala:

AT2104: Personality Development- [2 1 0 3]

Definition of Personality – Understanding Personality, Determinants of Personality Development and Perception and Perceptual Process; **Factors of Association** – Relationship, Personality Traits, Developing Effective Habits and Emotional Intelligence; **Motivation and Self-Development** – Understanding the relevance and importance of Motivation, Introspection, Self-Assessment, Self-Appraisal, Self-Development, Sigmund Freud Id, Ego and Super-Ego;

Self Esteem and Mind Mapping – Understanding Self-Esteem and Maslow, Self-Esteem and Erik Erikson, Mind Mapping and 360 Degree Assessment; **Types of Personalities** – Introvert, Extrovert and Ambivert; Learning about Effective Communication and its key aspects; **Leadership** – Understanding Assertiveness, Decision Making Skills, Conflict and its process and resolution, Leadership and qualities of a successful Leader;

Social Skills – Interpersonal Relationship, Personality Development as a Spiritual Journey beyond management of change, Importance of Good Manners and Etiquettes, Understanding Effective Speech, Body Language and projective Body Language; **Attitude** – Understanding Attitude, its significance and factors effecting attitudes, Understanding Positive Attitude and its advantages, Understanding Negative Attitude and its disadvantages; The various ways to develop positive attitude, Understanding Carl Jung's contribution to Personality Development Theory;

Stress Management – Introduction, Causes and Stress Management Techniques; **Time Management** – Time Management and its Importance, Techniques of Time Management and Time Management Styles.

Text/ Reference Books

1. R.S Feldman, Understanding Psychology, IV edition; Tata McGraw Hill India 1996.
2. Robert A. Baron, Psychology, III edition; Prentice Hall India, 1995
3. Steven A. Beebe, Susan J. Beebe, Diana K. Ivy (2012), Communication Principles for a Lifetime; New Delhi, Pearson.
4. Edward De Bono (1999). Six Thinking Hats. Little Brown & Co.
5. Shiv Khera (2004), You Can Win; Macmillan India Limited.
6. Daniel Goleman (1985), Emotional Intelligence.
7. Stephen R. Covey, The 7 Habits of Highly Effective People; Simon & Schuster Ltd.
8. R. M. Onkar, Personality Development and Career Management; S. Chand & Co.
9. Hurlock Elizabeth B, Personality Development; New Delhi, Tata Graw Hill.
10. R.S Feldman, Social Psychology, IV edition; Tata McGraw Hill India

SEMESTER-IV

AT2201: Biomechanics- [3 1 0 4]

Biomechanics: Meaning and Definition of Biomechanics, Need and Importance of Biomechanics in Physical Education and Sports, Application of Biomechanics in the field of Sports. **Kinematics:** Linear Kinematics - Distance and Displacement, Speed and Velocity, Acceleration. Angular Kinematics - Angular Distance and Displacement, Angular Speed and Velocity, Angular Acceleration. Role of Kinematics in the field of Sports.

Kinetics: Linear Kinetics - Inertia, Mass, Momentum, Friction. Angular Kinetics - Moment of Inertia, Couple, Stability. Role of Kinetics in the field of Sports. **Equilibrium:** Meaning, Types, and Principles of Equilibrium.

Motion: Meaning and its Types, Newton's laws of Motion, Implications of Motion in the field of Physical Education and Sports. **Lever:** Concept and Types of Lever, Advantages of Lever, Application of Lever in Sports.

Force: Meaning, Definition and types of Force, Application of Force in Sports. **Mechanical Principles:** a. Projectile, b. Aerodynamics. Mechanical Analysis of - a. Walking, b. Running, c. Jumping, d. Throwing.

References:

1. Barrlea, R., 2007 "Introduction to Sports Biomechanics" Ran sedge Publishers, USA.
2. Blazeovich, A., 2007 "Sports Biomechanics" A and C Black Publishers USA.
3. Bunn, J.W. (1972). Scientific principles of coaching. Englewood Cliffs, N.J.: Prentice Hall Inc.
4. Hall, Inc. Simonian, C., 1911 "Fundamentals of sport biomechanics" Englewood Cliffs, N.J.: Prentice Hall Inc.
5. Hall, S. (2018). Basic Biomechanics (8th ed.). McGraw-Hill Education.

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7. Hay, J.G., 1970 "The Biomechanics of Sports Techniques" Englewood Cliffs, N.J.: Prentice.
8. McGinnis, P. M., & McGinnis, P. (2013). Biomechanics of Sport and Exercise (Third ed.). HumanKinetics, Inc.

AT2202: Health Education- [3 1 0 4]

Health Education; Meaning, Definition and Dimensions of Health. Meaning, Aims, Objectives and Scope of Health Education, Principles governing Health Education, Need and Importance of Health education. **Hygiene;** Meaning and Definition of Hygiene, Types and Importance of Hygiene.

Obesity; Meaning and Types of Obesity, General Problems related to Obesity, Factors affecting Obesity, Causes of Obesity, Prevention and Remedial Measures of Obesity. **Nutrition;** Meaning and Functions, Nutrients - Carbohydrate, Fats, Proteins, Vitamins, Minerals and Water.

Balanced Diet; Meaning, Energy fuel, Daily energy requirements. **Communicable Diseases;** Causes, Prevention and Treatment of - Malaria, Typhoid, HIV/AIDS, Viral Hepatitis (A,B,C), Tuberculosis, Viral Fever (Dengue, Chickengunia). **Non-Communicable Diseases;** Cardiovascular Diseases, Cancer, Diabetes, Blindness, Accidents and Injuries.

Ergogenic Aid; Meaning and its classification - Nutritional, Physiological, Mechanical, Pharmacological. **Doping;** Meaning and Concept of Doping, Prevention from Doping, World Anti-Doping Agency, Prohibited Doping Substances.

References:

1. Park J.E. & Park K. (2005). "Textbook of preventive and social medicine- 21st Ed.", Jabalpur:Banarasi Das Bhanot Publication
2. Jenson, Dr. Bernard, 2000 "Nutrition Hand book" Viva books Pvt.Ltd., New Delhi.
3. Puri & Chandra. S.S., 2005 "Health and Physical Education" Surjeet Publications, New Delhi.
4. Ramachandran, Anil, 2011 "Handbook of Health, Fitness & Wellness" Akademia Publications, Calicut, Kerala.
5. Reddy, R.S., "Teaching Health and Nutrition" Commonwealth Publishers. N. Delhi.
6. Shaida, B.D. & Shaida, A.K., 2000 "Health and Physical Education" Arya book depot.
7. Corbin, Charles. B. et.al. C.A., 2004 "Concepts of Fitness and Wellness" Boston, McGraw Hill.
8. Kamlesh, M.L., 1998 "Physical Education: Facts and Foundations" P.B. Publications.
9. Singh, S., 1979 "Anatomy of physiology and Health Education" Ropar: Jeet Publications.

AT2203: Science of Sports Training- [3 1 0 4]

Sports Training; Meaning, Definition, Aim and Objective of Sports Training, Principles of Sports Training. Concept of Warming up and Cooling down, Its use and importance. **Methods of Sports Training;** Continuous Training, Interval Training, Repetition Method, Fartlek Training, Resistance Training, Circuit Training, Plyometric Training.

Training Components; Strength - Meaning and Definition, Methods of Strength Development, Speed - Meaning and Definition, Methods of Speed Development, Endurance - Meaning and Definition, Methods of Endurance Development, Coordination - Meaning and Definition, Methods of coordination Development, Flexibility - Meaning and Definition, Methods of Flexibility Development. **Training Load;** Definition and Types of Load, Factors affecting Training Load.

Technical Training; Meaning and Methods of Technical Training. **Tactical Training;** Meaning and Methods of Tactical Training.

Periodization; Meaning and types of Periodization, Aim and Content of Periods: Preparatory, Competition, Transition. **Planning;** Meaning and Importance of Planning training, Types of Plan: Short term and long-term training programmes, Talent Identification and Development, Long Term Athlete Development (LTAD).

References:

1. Dick, W. F., 1980 "Sports training principles" London: Lepus Books.
2. Harre, D., 1982 "Principles of sports training" Berlin: Sporulated.
3. Singh, H., 1984 "Sports Training, General Theory and methods" Patiala: NSNIS.
4. Uppal, A.K., 1999 "Sports Training" New Delhi, Friends Publication.

5. Jensen, R.C. & Fisher, A.G., 1979 "Scientific basis of athletic conditioning" Philadelphia: Lea and Fibiger, 2nd ed.
6. Bompa, Tudor, Buzzichelli, Carlo. (2019). "Periodization: Theory and Methodology of Training 6th Edition", Human Kinetics, Champaign, IL.
7. Haff, G., Triplett, N. T. (2016). "Essentials of Strength Training and Conditioning 4th Edition", National Strength & Conditioning Association (U.S.).
8. Balyi, I., Way, R., Higgs, C. (2013). "Long-term athlete development", Human Kinetics, Champaign, IL.

AT2204: Applied Physiotherapy and Rehabilitation- [3 1 0 4]

Introduction to Physiotherapy: Meaning, definition and guiding principles of physiotherapy, role of physiotherapy in sports specific injuries and rehabilitation, factors causing sports injuries, common sports injuries and their immediate treatment.

Introduction to Therapeutic Exercises: Definition, classification and therapeutic application of Active exercises (Free, Assisted & Resisted exercises), Passive exercises (relaxed and forced exercises), and PNF. Basic movement terminology, general cause of muscle weakness, principles of muscle strengthening.

Sports Massage: Definition, indications and contraindications of massage, classification of massage- effleurage group, percussion group, petrissage group, friction group, and vibration group. **Posture:** Definition, good and bad posture, causes & drawbacks of bad posture, common postural deviations, their causes and remedial exercises (a) Kyphosis (b) Scoliosis (c) Lordosis (d) Knock knees and Bow-legs (e) Flat Foot.

Rehabilitation: Effects and uses of the therapeutic modalities cryotherapy, thermotherapy, contrast bath, whirlpool bath, steam bath, sauna bath, wax therapy and electrotherapy.

References:

1. Bindal, V.D. (2010), Correctives of Physical Education, Therapeutic Exercise and Rehabilitation, Associated Publishing House, Agra.
2. Christine, M. D., (1999). *Physiology of sports and exercise*. USA: Human Kinetics.
3. Horns, Kang, L.: Therapeutical Exercise.
4. Jayaprakash, C. S. (2003), Sports Medicine, J.P. Brothers Pub., New Delhi.
5. Mellion, Morris. G.B. (1976), Sports Injuries & Athletic Problems. New Delhi: Surjeet Publications.
6. Benjamin, Patricia J., Lamp, Scott P. (2005). Understanding sports massage-2nd ed. Human Kinetics, Champaign IL.
7. Sareem, Kareem (2004), Sports Medicine and Management: A Practical Approach. Vol. I, New Delhi: IVP Publishing House.
8. Stuart Porter: Tidy's Physiotherapy, Elsevier Woburn (2005).
9. Prentice, William E. (2009). Therapeutic Modalities: For Sports Medicine and Athletic Training (6th ed.). McGraw-Hill.

SEMESTER-V

AT3101: Basics of Research- [3 1 0 4]

Introduction: Meaning, nature, scope and importance of research in Physical Education, qualities of a good researcher, classification of research **Problem:** Selection and defining of a research problem, objective, hypothesis, problem areas in Physical Education and Sports

Research Design: Why research design is necessary, types of research designs, experimental designs- true experimental, quasi- experimental designs, non-experimental

Measurement in Research: Meaning of measurement, types of scales, reliability, validity, objectivity and norms

Tools of Research: Various Tools of Research, Observation, Interview, Questionnaire, Opinionaires

Variable: Definition, types of variables, **Sampling:** Meaning of sample, sampling, types of sampling, **Research report:** Writing research proposal and report.

References:

1. Thomas R Jerry, Nelson K Jack & Silverman Stephen, Research Methods in Physical Activity, 6th Ed. USA, Human Kinetics, 2011.
2. Best, J.W. & Kahn, J.V. Research in education. Prentice-Hall of India. (9th ed, EEE), 2005.
3. Kerlinger, F.N. Foundations of behavioral research. (2nd ed.) New York: Rinehart Winston. Inc. Surjeet

Publications, 2012.

AT3102: Fundamentals of Statistics- [3 1 0 4]

Introduction: Meaning of statistics and sports statistics, importance of statistics in Physical Education and Sports.

Graphical Representation of Data: Various types of graphs and their uses. **Measures of Central Tendency:** Mean- method of calculation and uses, Median- method of calculation and uses, Mode- method of calculation and uses.

Measures of Variability: Range, standard deviation, Quartile Deviation. **Percentiles:** Meaning, method of calculation and uses, **Normality:** Concept and principles, Characteristics of normal distribution curve, standard score (z- score).

Parametric and non-parametric test: Assumption and various types of Parametric and non-parametric test

References:

1. Verma, J. P. (2009). A Text Book on Sports Statistics, Sports Publication, New Delhi.
2. Verma, J. P. (2012). Statistical Methods for Sports and Physical Education, Tata McGraw-Hill Education Private Limited, New Delhi.
3. H.E. Garret & R.S. Woodworth (1981). Statistics in psychology and education. New Delhi: VakilsFeffer & Simons Ltd.
4. Gupta, S.C., Statistical Methods, Sultan Chand & Sons., New Delhi 2012.
5. Goon, A.M., Gupta M.K., Dasgupta, B., Fundamental of Statistics, Vol. I, World Press, 1975.

AT3103: Adapted Physical Education- [3 1 0 4]

Introduction: Meaning, importance, objectives of adapted physical education, role of physical educator in sports for disabled, special rights and privileges for the disabled, social welfare program for the disabled, concept of Inclusion its need and Implementation, concept and need of integrated physical education.

Classification of differently abled: Changing concept of differently abled people, physically challenged, mentally challenged, speech and hearing challenged and visually challenged, other differently abled condition problems.

Paralympics and Special Olympics: Organization promoting Adaptive Sports (Special Olympics Bharat; Paralympics; Deaflympics).

Adapted physical education programme: Guiding Principles for Adapted Physical Education Programme (AAHPER Principle), physical education programme and activities for differently abled school children, co-curricular activities for differently abled children, aquatic activity programmes for differently abled, rehabilitative role & importance of aquatic activity.

References:

1. Anoop Jain, "Adapted Physical Education" Sports Publications, Ashok Vihar Delhi-52.
2. Arthur G. Miller & James, "Teaching Physical Activities to impaired youth" John Wilag & Sons Inc. Canada.
3. Arthur S. Daniels & Euilya, "Adapted Physical Education", Harpet & Row Publisher- New York..
4. Auxter, Byler, Howtting, "Adapted Physical Education and reactions" Morbey-St. Louis Missouri.
5. Auxter, D., Pyfer, J., Zittel, L., & Roth, K. (2010). Principles and methods of adapted physicaleducation and recreation. New York, NY: McGraw Hill.
6. Davis, R. (2011). Teaching disability sport: A guide for physical educators. Champaign, IL: Human Kinetics.
7. Winnick, J., & Porretta, D. L. (2016). Adapted Physical Education and Sport (Sixth ed.). Human Kinetics, Inc.

AT3130: Teaching Practice- [1 0 4 3]

Guidelines

10 teaching practice lessons out of which 5 lessons in class-room situation and 5 lessons for out-door activities within premises on the students of BPES course.

AT 3133: Internship- [0 0 0 1]

Guideline: Internship it is mandatory that students need to go for internship which are specifically related to

Physical Education and Sports during their Summer Vacation for minimum of 45 Days.

SEMESTER-VI

AT3201: Coaching and Officiating- [3 1 0 4]

Introduction: Concept of officiating and coaching, Importance and principles of officiating, Relation of official and coach with management, players and spectators, Measures of improving the standards of officiating and coaching.

Coach as a Mentor: Duties of coach in general, pre, during and post- game, Philosophy of coaching, Responsibilities of a coach on and off the field, Psychology of competition and coaching.

Duties of Official: Duties of official in general, pre, during and post-game, Philosophy of officiating, Mechanics of officiating position, singles and movement etc., Ethics of officiating.

Qualities and Qualifications of Coach and Official: Qualities and qualification of coach and official, General rules of games and sports (Soccer, Volleyball, Badminton, Athletics, Swimming, Cycling, Basketball, Lawn Tennis, Cricket), Integrity and values of sports.

References:

1. Bunn, J. W. (1972). "Scientific principles of coaching", Prentice Hall.
2. Singh Ajmer et.al, (2017) "Essentials of Physical Education", Kalyani Publishers Ludhiana.
3. Dyson, G. H. (1963). "The mechanics of athletics", London: University of London Press Ltd.
4. Singer, R. N. (1972). "Coaching, athletic & psychology", M.C. Graw Hill, New York.
5. Brar. T. S. (2002). "Officiating techniques in Track and Field", Bhargava Press, Gwalior.
6. De Souza A. J. (1999). "Track Geography and Field Sites". DBAC Sports Envisions, Chennai.
7. Schrag, M. (2019). The Sports Rules Book, Human Kinetics, Champaign IL.
8. Latest Official Rule Books of International Federations of different games and sports coaching manuals

AT3202: Management in Physical Education- [3 1 0 4]

Management; Meaning and Definition of Management, Nature of Management in Physical Education and Sports, Importance of Management in Physical Education and Sports, Functions of Management, Careers in Sport Management.

Administration; Meaning and Importance of Administration, Factors influencing Good Administration.

Supervision; Meaning, Definition and Principles of Supervision, Techniques of Supervision in Physical Education and Sports. **Events:** Sport Venues, Event Management, Risk Management, and Crowd Control.

Class Management; Meaning, Types and Factors affecting Class Management. **Facility Management;** Meaning of facility management, Role of Facility Manager, Management Functions in Facility Management,

Sports Entrepreneurship; Meaning of Sports Entrepreneurship, Technology and Innovation in Sports, Adoption and Diffusion of Technology Innovation in Sport, Ethics and Sport Entrepreneurship, Management as shared responsibility, Quality, Speed and flexibility, Innovation, Sustainable growth, Integrity.

References:

1. Chakraborty, 1999 "Sports Management" New Delhi, Sports Publication.
2. Charles E. Forsy, 1979 "Administration of High School Athletic, Sixth Edition" Prentice Hall, Inc. Englewood, New Jersey.
3. Dheer S. and Radhika Kamal, 1991 "Organization and Administration of Physical Education" Friends Publication, New Delhi.
4. Kazmar, H.C. and Cassidy, 1958 "Methods in Physical Education" W. B. Saunders Co., Philadelphia, London.
5. Brar R.S., Joshi R., Gill M., Kanwar S. (2012). "Fundamentals of Physical Education". Kalyani Publishers, New Delhi.
6. Valmer Edward F, Arthur A., Esslinger, Betty Foster McCule and Kenneth G. Tillman 1979 "The Organization and Administration of Physical Education" Prentice Hall, Inc, New Jersey.
7. Esherrick, C. and Baker, Robert E. 2013 "Fundamentals of Sport Management" Human Kinetics, Champaign, IL.
8. Fried, G. 2010. "Managing sport facilities", Human Kinetics, Champaign, IL.

9. Ratten, Vanessa. (2018). "Sport Entrepreneurship: Developing and Sustaining an Entrepreneurial Sports Culture" Springer International Publishing, Switzerland.

AT3230: Yoga, Fitness and Naturopathy- [1 0 4 3]

Yoga: Meaning, definition and origin of Yoga, Historical development of yoga in India, difference between general and yogic exercises, misconceptions about yoga, guiding principles of yogic practice, constituents of Asthanga Yoga. **Asanas:** Meaning and types of asanas, General techniques and benefits of the following asanas: Padmasana, Vajrasana, Halasana, Bhujangasana, Sarvangasana, Chakrasana, Dhanurasana, Salabhasana, Paschimotanasana, Mayurasana, Shirshasana, Technique and benefits of Surya namaskara.

Shat Karma: Concept of Shat Karma (Shudhi Kriyas) and brief description of the following: a. Neti b. Dhuti c. Nauli d. Bhasti e. Kapalabhati f. Tratak. **Pranayama:** Meaning and definition of Pranayama, general techniques and physiological benefits of the following: a. Ujjai b. Sitkari c. Shitali d. Bhastrika e. Bhramari f. Kapalabhati.

Fitness: Meaning of fitness, aims, objectives and principles of training, exercise training for muscular strength and endurance, safety techniques (spotting, proper body alignment, lifting techniques, spatial awareness, proper breathing and relaxation techniques) **Basic exercises:** Free hand exercise, free weight exercise, exercise bands and tubing, medicine balls, swiss ball, types of flexibility exercise, core training, strength training, Plyometric training, LSD, Fartlek training, Interval training, Circuit training.

Current trends in fitness and conditioning: Dance, aerobics, Zumba, Power Yoga, Pilates, HIIT, Tabata, The Scientific 7-Minute Workout, Advanced 7-minute workout, and one minute workout. **Nutrition:** Meaning and types of nutrients, weight management-proper practices to maintain, lose and gain weight concept of CICO, balance diet. **Naturopathy:** Meaning and importance of naturopathy, basic principles of naturopathy, dietetic principles in naturopathy, different therapies in naturopathy.

References:

1. American College of Sports Medicine. (2017). ACSM's Resources for the Personal Trainer (5th ed.). LWW.
2. Brick, Lynne G. (1996). Fitness Aerobics. Pennsylvania State University, Human Kinetics, USA.
3. Gibala, M., & Shulgan, C. (2017). The One-Minute Workout: Science Shows a Way to Get Fit That's Smarter, Faster, Shorter (1st ed.). Avery.
4. Goel, B. B. (2013). Secrets of Naturopathy & Yoga (UK ed.). Sterling Publications.
5. Hoeger, Werner W. K., Hoeger, Sharon A., Fawson, Amber L. & Hoeger, Cherie I. (2016). Fitness and Wellness, 12th Edition, Cengage Learning, Boston, USA.
6. Jamieson, U. (2015). Naturopathy for Beginners: Evolve to the Alternate Form of Naturopathic Medicine for a Healthier, More Natural You (Volume 1) (1st ed.). CreateSpace Independent Publishing Platform.
7. McArdle, William D., Katch, Frank I. and Katch, Victor L. (2014). Exercise Physiology-Energy, Nutrition, and Human Performance, 8th Edition, Lippincott Williams and Wilkins-A Wolters Kluwer Company.
8. Morter, M. Ted. (2004). Know-It-All-Guide to Health & Wellness, Pustak Mahal, Delhi.
9. Perez, Beto and Robinson, Maggie Greenwood. (2009). Zumba: Ditch the Workout, Join the Party! The Zumba Weigh Loss Program, Grand Central Publishing, New York.
10. Smith, Denise L. & Fernhall, Bo (2011). Advanced Cardiovascular Exercise Physiology, Human Kinetics, USA.
11. Saraswati, S. N. (2012). Gheranda Samhita/Commentary on the Yoga Teachings of Maharshi Gheranda (1st Edition). Yoga Publications Trust/Munger/India.

DISCIPLINE SPECIFIC ELECTIVE-I

SEMESTER-I

AT1130: F.A.-1 Football and Basketball- [1 0 4 3]

Football: Historical development of football, national & international governing bodies of football, major tournaments of football, rules of football and their interpretation. **Fundamental Skills- Kicks-** Inside kick, instep kick, outer instep kick. **Trapping:** Trapping the rolling ball, trapping bouncing ball with sole. **Dribbling:** With instep, inside and outer instep of the foot. **Heading:** While standing, running and jumping. **Tackling:** Simple tackling and slide tackling. **Goal keeping:** Collection of balls, ball clearance-kicking, throwing and deflecting. **Throw in.**

Basketball: Historical development of basketball, national & international governing bodies of basketball, major

tournaments of basketball, rules of basketball and their interpretation. **Fundamental Skills- Pass:** Player stance, ball handling passing-two hand chest pass, two hand bouncepass, one hand pass, side arm pass, overhead pass, hook pass, **Receiving:** Two hand receiving, one hand receiving, receiving in stationary position, receiving while jumping, receiving while running, **Dribbling:** How to start dribble, how to drop dribble, high dribble, low dribble, reverse dribble, rollingdribble, **Shooting:** Layup shot and its variations, one hand set shot, one hand jump shot, hook shot, free throw, **Rebounding:** Defensive rebound, offensive rebound, knock out, rebound organization, individual defensive-guarding with the ball and without the ball, pivoting.

References:

1. "Training Manual of Basketball", NSNIS, Patiala.
2. Drewelt, J. (2007), "How to improve Basketball", Crabtree Publishing Co., USA.
3. Sharma, O.P. (2003), "Basketball Skills and Rules", Khel Sahitya Kendra, New Delhi.
4. Thani, Lokesh (1995), "Skills and Tactics of Basketball", Sports Publication, New Delhi.
5. "Official Rule Book of Basketball", International Basketball Federation
6. "Training Manual of Basketball", NSNIS, Patiala.
7. Drewelt, J. (2007), "How to improve Basketball", Crabtree Publishing Co., USA.
8. Sharma, O.P. (2003), "Basketball Skills and Rules", Khel Sahitya Kendra, New Delhi.
9. Thani, Lokesh (1995), "Skills and Tactics of Basketball", Sports Publication, New Delhi.
10. "Official Rule Book of Basketball", International Basketball Federation

AT1131: F.A.-2 Light Apparatus- [1 0 4 3]

Dumbbells/ Wands/ Hoop/ Umbrella/ lezzium/ Flags/Indian clubs/Tipri: Fundamentals skills, Apparatus/ Light apparatus Grip, Attention with apparatus/ Light apparatus, Stand – at – ease with apparatus/ light apparatus, Exercise with verbal command, drum, whistle and music – Two count, four count, eightcount and sixteen count., Standing Exercise, Jumping Exercise, Moving Exercise, Combination of above all Drill and Marching and Ceremonial parade

References:

1. Saha, A. K. Sarir Siksher Ritiniti, Rana Publishing House, Kalyani, India. 2
2. Bandopadhyay, K. Sarir Siksha Parichay, Clisique Books, Kolkata.
3. Kayal, R. Sarir Siksha Buniad O Itihas. Clisique Books. Kolkata.

DISCIPLINE SPECIFIC ELECTIVE-II

SEMESTER-II

AT1231: F.A.-3 Volleyball and Handball- [1 0 4 3]

Volleyball: Historical development of volleyball, national & international governing bodies of volleyball, major tournaments of volleyball, rules of volleyball and their interpretation. **Fundamental Skills-** Players stance-receiving the ball and passing to the team mates, the volley (overhead pass), the dig (Under hand pass), service-under arm service, side arm service, tennis service, round arm service.

Handball: Historical development of handball with special reference to India, important tournaments held at national and international levels, rules and their interpretations, duties of officials, **Fundamental skills:** Passing and receiving techniques-overhand pass, push pass, wrist pass, bounce pass, behind and back pass, **ball reception techniques-** catching at chest level, catching below waist, catching at sides, catching at head height, catching in the air, **dribbling-**high dribbling, low dribbling, **shooting-**set shot, jump shot long, jump shot high, wing shot.

References:

1. Training Manual of Volleyball", NSNIS, Patiala.
2. American Volleyball Coaches Association (2005), "Volleyball : Skills and Drills", Human Kinetic, USA.
3. Scates, A.E.(1993), "Winning Volleyball", W. C. Brown, USA.
4. Sagar, S. K.(1994), "Cosco skill Tactics -Volleyball", Sports publication, Delhi.
5. "Official Rule Book of Volleyball", International Volleyball Federation.
6. Training Manual of Handball", NSNIS, Patiala.
7. Phillips, B. E. (2009), "Fundamental Handball", Kessinger Publishers, USA.
8. Jain, D. (2003), "Play and Learn Handball", Khel Sahitya Kendra, New Delhi.
9. Surbone, L.M. et. al. (2010), "Team Handball", Betascript Publishing Co., USA.

10. "Official Rule Book of Handball", International Handball Federation.

AT1232: F.A.-4 Cricket and Hockey- [1 0 4 3]

Historical development of the concerned game at national and international levels, National & International bodies controlling sport and their affiliated units and Major National and International competitions, rules and their interpretations, duties of officials and measurement specifications.

Cricket: Fundamental Skills- Basics and fundamentals of **Batting:** Stance, back lift, Forward and back, Defensive shot, Drive, Flick, Cut, hook, pull, cut, sweep. **Bowling** – seam and swing bowling, **Fielding**, Throwing & Catching, Wicket Keeping.

Hockey: Fundamental Skills- Technique skills- Classification of techniques/ skills-explanation of push, stop, hit, flick, dribble, Scoop, types pass.

References:

1. Jain, R. Play and Learn Cricket, Khel Sahitya Kendra, New Delhi.
2. Vivek Thani, Coaching Cricket, Khel Sahitya Kendra, New Delhi
3. Tyson Frank "The Cricket Coaching Manual", Calcutta, Rupa & Co, 1985.
4. WeinHarat "The Science of Hockey" London Pelham Books, 1979.
5. Claime Michal, Taverna (2009) Field Hockey – Techniques, Tactics, London:
6. Elizabet Ander (2009) Field Hockey – Steps to Success, London: Human Kinetics. Human Kinetics.

DISCIPLINE SPECIFIC ELECTIVE-III

SEMESTER-III

AT2130: F.A.-5 Judo, Wrestling and Boxing- [1 0 4 3]

Historical development of the concerned game at national and international levels, National & International bodies controlling sport and their affiliated units and Major National and International competitions, rules and their interpretations, duties of officials and measurement specifications.

Judo: Fundamental Skills: Rei (Salutation)-Ritsurei (Salutation in standing position), Zarai (Salutation in the sitting position), Kumi kata (Methods of holding judo costume), Shisei (Posture in Judo), Kuzushi (Act of disturbing the opponent posture), Tsukuri and kake (Preparatory action for attack), Ukemi (Break Fall)-Urhiro Ukemi (Rear break Fall), Yoko Ukemi (Side Break Fall), Mae Ukemi (Front Break Fall), Mae mawari Ukemi (Front Rolling break fall), Shin Tai (Advance or retreat foot movement)-Suri-ashi (Gliding foot), Twugi-ashi (Following footsteps), Ayumi-ashi (Waling steps, Tai Sabaki (Management of the body), Nage Waze (Throwing techniques)-Hiza Guruma (Kneewheel), Sesae Twurikomi-ashi (Drawing ankle throw), De ashi hari (Advance foot sweep), O Goshi (Major loinm), Seoi Nage (Shoulder throw), Katama waze (Grappling techniques)-Kesa gatame (Scaffhold), Kata gatame (Shoulder hold), Kami shiho gatama (Locking of upper four quarters), Method of escaping from each hold.

Wrestling: Fundamental Skills: Take downs, Leg tackles, Arm drag, Counters for take downs, Crossface, Whizzer series, Escapes from under-sit-out turn in tripped, Counters for escapes from under-Basic control back drop, Counters for stand up, Pinning combination-Nelson series (Half Nelson, Half Nelson and Bar arm), Leg lift series, Leg cradle series, Reverse double bar arm, chicken wing and half Nelson, Escapes from pinning: Wing lock series, Double arm lock roll, Cridge, Standing Wrestling-Head underarm series, whizzer series.

Boxing: Fundamental Skills: Stance, footwork, pivot, punches in boxing-jab (a sudden punch), cross (a straight punch), hook-a short side punch, uppercut-a short swinging upward punch, punch combinations, defense-blocking head & body punches, counter punching-counters to the jab, right cross/overhand/uppercut, left hook/uppercut.

References:

1. Kano, J., Murata, N., & Kano, Y. (2013). Mind Over Muscle: Writings from the Founder of Judo (1st ed.). Kodansha International.
2. Daigo, T. (2016). Kodokan Judo Throwing Techniques (Reprint ed.). Kodansha International.
3. Ed. D, D. J. A. (2014). Wrestling Drills: for the Mat and the Mind (Second ed.). MAG, Incorporated.

4. Mysnyk, M. C., Davis, B., & Simpson, B. (1994). *Winning Wrestling Moves* (First ed.). HumanKinetics, Inc.
5. Ledebor, S. (2001). *A Basic Guide to Wrestling*. Van Haren Publishing.
6. AIBA Coaches Commission (2011). *AIBA Coach Manual*, AIBA HQs Office, Lausanne.
7. AIBA (2019). *AIBA Technical & Competition Rules*, AIBA HQs Office, Lausanne.

AT2131: F.A.-6 Karate and Taekwondo- [1 0 4 3]

Historical development of the concerned game at national and international levels, National & International bodies controlling sport and their affiliated units and Major National and International competitions, rules and their interpretations, duties of officials and measurement specifications.

Fundamental Basic techniques of Karate: Hand Techniques; Chudan Tsuki- Middle Punch, Gedan Tsuki- Low Punch, Jodan Tsuki- High Punch, Jodan Morote Tsuki- Double Punch, Shuto Uchi Uchi- Inside Out Knife Hand Strike, Uraken Shomen Uchi- Inverted Fist Strike, Seiken Ago Uchi- Jab To Head, Shotei-Uchi- Palm Heel Strike, Hiji Ushiro- Back Elbow Strike, Chudan Soto Uke- Middle Outside In Block, Gedan Barai- Low Block, Jodan Uke- High Block, Chudan Uchi Uke- Middle InsideOut block. Kicks: Mae Keage- Front Stretch Kick, Hiza Geri – Knee Kick, Mae Geri- Front Snap Kick, Kin Geri- Groin Kick, Ushiro Geri- Back Kick, Mawashi Geri, Kekomi. Stances: Fudo Dachi- Normal Stance, Kiba Dachi- Horse Straddle Stance, Kokutsu Dachi- Back Leaning Stance, Heisoku Dachi- Close Stance (Used in Kyotskai), Zenkutsu Dachi- Front Leaning Stance.

Fundamental Basic techniques of Taekwondo: Blocks, Turnings, Forward, Moving, Kicks, Back- Fists, Elbow, Combinations (Blocks and Punches), Combination, (Blocks – Punches – Kicks), Moving Kicks, standing kicks, jumping kicks (in moving forward with front leg), jumping kicks (with back leg on the spot), Turning back kicks, Kick Combinations.

References:

1. Anslow, S. P. (2010). *The Encyclopedia of Taekwon-do Patterns*, Vol. 3 (2nd ed.). CheckPoint Press.
2. Hornsey, K. (2003). *Taekwondo: A Step-by-Step Guide to the Korean Art of Self-Defense* (1st ed.). Tuttle Publishing.
3. Martin, A. P. (2016). *The Shotokan Karate Bible 2nd edition: Beginner to Black Belt* (2nd ed.). Bloomsbury USA.
4. Funakoshi, G. (2013). *Karate-Do: My Way of Life* (Reprint ed.). Kodansha International.
5. Barth, K., & Barth, B. (2017). *Learning Fencing: A Training and Activity Book for 6- to 10-year-olds* (3rd ed.). Meyer & Meyer Sport.
6. Barth, B., & Beck, E. (2017). *The Complete Guide to Fencing* (2nd ed.). Meyer & Meyer Sport.

DISCIPLINE SPECIFIC ELECTIVE-IV

SEMESTER-III

AT2132: F.A.-7-100m, 800m, 4x400m Relay, Shot put and Long Jump- [1 0 4 3]

Introduction: Introduction of track and field events, historical development of concerned event, competitions and records of 100m, 800m, 4x400m Relay, Shot put and Long Jump, Marking procedure for the concerned event. **Fundamental skills /Techniques:** Start and finish of 100m, 800m, 4x400m Relay, baton exchange (Upward & Downward sweep). Glide and Disco put Technique of shot put.

Approach run, take off, flight & landing in Shot, Hang & Hitch kick Techniques of long jump. **Officiating:** Rule of the concerned event and their interpretation, Duties of the concerned officials, measurements and equipment specifications.

References:

1. Book of Rules | Official Documents. (2020). Worldathletics.Org. <https://www.worldathletics.org/about-iaaf/documents/book-of-rules>
2. Bowerman, J.W, Freeman, H. W, *High Performance Training for Track and Field*, Leisure Press: Champaign Illinois, 1989. Champaign Illinois, 1991.
3. Dunn, G.D Jr., McGill, Kevin, *The Throws Manual*, Tafnews Press: Mountain View, USA, 1991.
4. *European Athletics Championships Zurich 2014 – STATISTICS HANDBOOK (PDF)*, European Athletics Association, retrieved 13 August 2014

5. Gambetta, Vern, The Athletics Congress's Track and Field Coaching Manual, Lerisure Press: Raab, S., & Craig, D. (2015). *Evidence-Based Practice in Athletic Training* (First ed.). Human Kinetics, Inc.
6. Guthrie, Mark, Coaching Track and Field Successfully, Human Kinetics: Champaign IL, 2006
7. Hoshino, Atsushi The Origin of Indoor Track and Field Meets. IAAF. Retrieved on 2011-04-09.
8. Runner's World. (2016). Runner's World Training Diary (2nd ed.). Wiley.
9. The Ancient Olympic Games: Mythic Worship of Gods and Athletes. e-Legacies. Retrieved on 2010-05-28.
10. World Athletics Competition Rules (1 November 2019).

AT2133: F.A.-8- 200m, 1500m, 4x100m Relay, Discuss Throw and Triple Jump- [1 0 4 3]

Introduction: Introduction of track and field events, historical development of concerned event, competitions and records of 200m, 1500m, 4x100m Relay, Discuss throw and Triple Jump, Marking procedure for the concerned event. **Fundamental skills /Techniques:** Star and finish of 200m, 1500m, 4x100m Relay, baton exchange (Upward & Downward sweep); Holding, use of index finger, preliminary swings, turns (11/2 & 21/2) in Discuss throw; approach run, hop, step, jump, action ratio in (hop, step & jump) in triple jump. **Officiating:** Rule of the concerned event and their interpretation, Duties of the concerned officials, measurements and equipment specifications.

References:

1. Book of Rules | Official Documents. (2020). Worldathletics.Org. <https://www.worldathletics.org/about-iaaf/documents/book-of-rules>
2. Bowerman, J.W, Freeman, H. W, High Performance Training for Track and Field, Lerisure Press: Champaign Illinois, 1989. Champaign Illinois, 1991.
3. Dunn, G.D Jr., McGill, Kevin, The Throws Manual, Tafnews Press: Mountain View, USA, 1991.
4. European Athletics Championships Zurich 2014 – Statistics Handbook (PDF), European Athletics Association, retrieved 13 August 2014
5. Gambetta, Vern, The Athletics Congress's Track and Field Coaching Manual, Lerisure Press: Raab, S., & Craig, D. (2015). *Evidence-Based Practice in Athletic Training* (First ed.). Human Kinetics, Inc.
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8. Runner's World. (2016). Runner's World Training Diary (2nd ed.). Wiley.
9. The Ancient Olympic Games: Mythic Worship of Gods and Athletes. e-Legacies. Retrieved on 2010-05-28.
10. World Athletics Competition Rules (1 November 2019).

DISCIPLINE SPECIFIC ELECTIVE-V

SEMESTER-IV

AT 2230: F.A.-9 Tennis, Table Tennis, Badminton and Squash- [1 0 4 3]

Historical development of the concerned game at national and international levels, National & International bodies controlling sport and their affiliated units and Major National and International competitions, rules and their interpretations, duties of officials and measurement specifications.

Fundamental Basic techniques of Lawn Tennis

Grips-continental, eastern forehand, semi western, eastern backhand, double hand backhand, basic and advance strokes-forehand drive and its variations, backhand drive and its variations, basic service and slice service, volley, overhead smash.

Fundamental Basic techniques of Table-Tennis:-Basic techniques: Grip, stance, (offensive and defensive) Push: counter attack, service and receive, drive, block, chop and lob, Advance Techniques: footwork, service variations, drive variations, flick, smash, offensive and defensive techniques, placement, x-point, anticipation, observation, (identify the weakness and strength of trainees and opponents), various tactical drills, rules and their interpretations and duties of officials.

Fundamental Basic techniques of Badminton

Court: Diagram of the court with Measurements and Specifications, Court equipment (Posts and Net)**Shuttle:** Dimensions and Specifications, Toss: Procedure Scoring system Change of ends Service: Singles (serving and receiving courts). Doubles: Serving and receiving courts, Order of play and position on court, Scoring and serving, Sequence of serving Service court errors Lets Shuttle not in play Continuous play. Grip (Forehand grip and Backhand grip) Footwork Serve (High serve, Low serve, Flick serve) Strokes (Overhead forehand stroke, overhead backhand stroke, Underarm forehand stroke and Underarm backhand stroke) Shots (Clearing/lobbing, Drop shots and Smash), Terminology Short serve Long serve Wide serve Service order, Love, All, Deuce, Forecourt, Mid-court, Rear court, Rally, Set, Rubber, Lunge, Clear lob, Half smash, Full smash, Carry, Baseline smash, Drive, Push shot, Tumbling net shot, Net kill, Net lift Hairpin net shot, Alley, Back alley, Follow through, Court, Woodshot Flick, Bird, Singles footwork base.

Fundamental Basic techniques of Squash

Service-types of service, receiving; shot-down the line, cross court, drop, half volley; tactics-defensive, attacking; types of grips, forehand straight drive, backhand straight drive, types of boast, drop shot

References:

1. Bloss, M. V., & Hales, S. R. (2000). Badminton (8th ed.). McGraw-Hill Humanities/Social Sciences/Languages.
2. Mittal, P. (2015). Badminton: Rules And Regulations. Neelkanth Prakashan.
3. Keita, M. (2018). Badminton Skills and Tactics through Diagrams (Chinese Edition) (1st ed.). Posts and Telecom Press.
4. Jespersen, M., & Hutchison, M. (2010). Tennis Poster/Chart Laminated; How to Play Tennis - Tennis Rules - Tennis Court - Tennis Player Positions - Tennis Scoring - Tennis Racket (1st ed.). Productive Fitness Publishing.
5. Rive, J., & Williams, S. C. (2011). Tennis Skills & Drills (First ed.). Human Kinetics, Inc.
6. Squash Rackets Association of Victoria & Squash Rackets Association of Victoria. (1939). Official Handbook Containing Rules of Squash Rackets and Interpretations by the Squash Rackets Association of Victoria, Standard Dimensions of Court, Notes on Handicapping, Advice to Players, By-laws for Pennant Players. The Association.
7. Barnaby, J. M. (1979). Winning Squash Racquets (First Edition). Allyn & Bacon.
8. Philip, D. (1975). Table Tennis. Atheneum. A. (2018). Table Tennis; A Description of the Game, with Rules and Instructions for Playing. Van Duuren Media.
9. Geske, K. M., & Mueller, J. (2017). Table Tennis Tactics. Meyer & Meyer Sport, Limited.

AT 2231: F.A.-10 Softball and Baseball- [1 0 4 3]

Softball/Baseball

Historical development of the game, national & international governing bodies of game, major tournaments of Softball/Baseball, rules of Softball/Baseball and their interpretation.

Fundamental Skills- Batting: Grip: standard; choke grip, swing; bunts. **Pitching:** Baseball: slider; fast pitch; curve ball; drop ball; rise ball; change up; knuckle ball; screw ball. Softball: windmill; slingshot. Starting position: wind up; set. **Fielding:** Catching: basics to catch fly hits; rolling hits. Throwing: over arm; side arm. **Base running:** single; double; triple; home run. **Sliding:** bent leg slide; hook slide; head first slide.

References:

1. Schrag, M. (2019). "The Sports Rules Book", Human Kinetics, Champaign, IL.
2. AAU Baseball. (2018). National Championship Rule Book 2018. [Online]. Available: <https://cdn2.sportngin.com/attachments/document/0154/4787/formet-rules-nationals-2018.pdf>
3. Little League Baseball and Softball. (2018). Rules, Regulations, and Policies. [Online]. Available: <https://www.littleleague.org/playing-rules/rules-regulations-policies>
4. Office of the Commissioner of Baseball. (2017). Official Baseball Rules. [Online]. Available:

http://mlb.mlb.com/documents/0/4/0/224919040/2017_Official_Baseball_Rules_dbt69t59.pdf

5. World Baseball & Softball Confederation. (2018). 2018-21 Official Rules of Softball. [Online]. Available: <http://www.wbssc.org/wp-content/uploads/ENGLISH-2018-2021-Slow-Pitch-Softball-Playing-Rules-A4-1.pdf>
6. Rule & Regulation - Ball Badminton Federation of India (BBFI). [Online]: http://ballbadmintonindia.com/rules_regulation.php
7. Game history of Ball Badminton. Archive. <https://web.archive.org/web/20091203121236/http://ballbadmintonfederationofindia.com/gamehistory.html>

DISCIPLINE SPECIFIC ELECTIVE-VI

SEMESTER-V

AT3140: Sports Journalism- [3 0 2 4]

Introduction: Meaning and definition of journalism, ethics of journalism-canons of journalism- sportsethics and sportsmanship-reporting sports events, national and international sports news agencies **Sports Bulletin:** Concept of sports bulletin, journalism and sports education, structure of sports bulletin, compiling a bulletin, types of bulletin,

Role of journalism in the field of physical education:Sports as an integral part of physical education, sports organization and sports journalism, general newsreporting and sports reporting **Mass Media:** Mass media in journalism, radio and T.V. commentary, running commentary on the radio, sports expert's comments, role of advertisement in journalism, sportsphotography-equipment, editing, publishing

Report Writing on Sports: Brief review of olympic games, preparing report of an annual sports meet for publication in newspaper, organization of press meet,

Journalism: Sports organization and sports journalism, general news reporting and sports reporting, methods of editing a sports report, evaluation of reported news interview with and elite player and coach.

References:

1. Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi: Surjeet Publications
2. Ahiya B.N. Chobra S.S.A. (1990) Concise Course in Reporting. New Delhi: Surjeet Publication
3. Bhatt S.C. (1993) Broadcast Journalism Basic Principles. New Delhi. Haranand Publication Dhananjay Joshi (2010) Value Education in Global Perspective. New Delhi: Lotus Press. KannanK (2009) Soft Skills, Madurai: Madurai: Yadava College Publication MohitChakrabarti (2008): Value Education: Changing Perspective, New Delhi: Kanishka Publication.
4. Padmanabhan. A & Perumal A (2009), Science and Art of Living, Madurai: Pakavathi PublicationShiv Khera (2002), You Can Win, New Delhi: Macmillan India Limited. Varma A.K. (1993) Journalism in India from Earliest Times to the Present Period.Sterling publication Pvt. Ltd.
5. Venkataiah. N (2009) Value Education,- New Delhi: APH Publishing Corporation

AT3141: Health and Fitness Management- [3 0 2 4]

Introduction: Meaning and definition of physical fitness and wellness, Components of physical fitness(health related physical fitness, performance related physical fitness), Factors affecting physical fitnessand Importance of physical fitness, Prominent health problems associated with inactivity.

Exercises for Fitness & Designing of the programme: Means of fitness development (Aerobic and anaerobic exercises, Calisthenics exercises, swiss ball exercises, Exercises with free weights, Machine and resistance bands, Plyometrics), Development of core, Calculate target heart rate zones for various exercise intensities. Designing different fitness training programmes and formalities prior to conduct of fitness program for different age group and sex (children, adults and older populations).

Nutrition and Weight Management; Nutrition- Meaning and Importance, Balanced Diet and Its components, Pre, During and Post Exercise Meal, Calorie requirements and Daily Energy expenditure, eating disorders, BMI, Obesity and its hazards, Dieting versus exercise for weight control.

Establishment and Management of Fitness Centre; Principles of starting a fitness center (environment, location, policy, offer of Programmes, record keeping, public relation), Facilities of fitness center, Types of membership in fitness centers, Safety aspects in a fitness center, Qualification and qualities of a fitness trainer.

References:

1. Armbruster, C.K., Evans, E.M. and Laughlin C.M. (2019). "Fitness and wellness: a way of life", Human Kinetics, Champaign, IL.
2. Schoenfeld, B.J. (2016). "Science and development of muscle hypertrophy", Human Kinetics, Champaign, IL.
3. Bushman, B. (2017). "ACSM's complete guide to fitness & health- Second edition", Human Kinetics, Champaign, IL.
4. Haff, G., Triplett, N. T. (2016). "Essentials of Strength Training and Conditioning 4th Edition", National Strength & Conditioning Association (U.S.).
5. Heyward, V.H., Gibson, A.L. (2014). "Advanced fitness assessment and exercise prescription- Seventh edition", Human Kinetics, Champaign, IL.
6. Hoeger, Werner W. K., Hoeger, Sharon A., Fawson, Amber L. & Hoeger, Cherie I. (2016). Fitness and Wellness, 12th Edition, Cengage Learning, Boston, USA.
7. McArdle, William D., Katch, Frank I. and Katch, Victor L. (2014). Exercise Physiology-Energy, Nutrition, and Human Performance, 8th Edition, Lippincott Williams and Wilkins-A Wolters Kluwer Company.
8. Faigenbaum, A. D., Westcott, W.L. (2009). "Youth strength training: programs for health, fitness, and sport- 2nd ed.", Human Kinetics, Champaign, IL.
9. Perez, Beto and Robinson, Maggie Greenwood. (2009). Zumba: Ditch the Workout, Join the Party! The Zumba Weight Loss Program, Grand Central Publishing, New York.
10. Smith, Denise L. & Fernhall, Bo (2011). Advanced Cardiovascular Exercise Physiology, Human Kinetics, USA.
11. Lawrence, Delible. (1999). "Exercise to Music". A & C Black Publishers, London.

AT3142: Yoga and Naturopathy- [3 0 2 4]

Introduction: Meaning, definition and origin of Yoga, Aims, objectives and scope of yoga, historical development of yoga in India, Importance of yoga in the modern era and yoga as a philosophy. **Types of Yoga:** Karam yoga, Janana yoga, Hatha yoga, Raj yoga, Mantra yoga, Laya yoga, Bhakti yoga.

Ashtanga Yoga: Concept of Asthanga Yoga, Yama, Niyama, Asana, Pranayama, Pratyahar, Dharma, Dhyana and Samadhi. Role and mode of practice of each step in the attainment of goal, **Asanas:** Asanas and their importance, Classification of asanas, general techniques and benefits of various asanas. **Shatkarma:** Concept of Shat Karma (Shudhi Kriyas) and brief description of Neti, Dhoti, Nauli, Tratak, and Kapalabhati.

Pranayama: Meaning and definition of Pranayama, general techniques and physiological benefits of various types of pranayamas. **Bandhas and Mudras:** Introduction, types and roles of bandhas and mudras. **Chakras and Kundalini:** Meaning and types of chakras and fundamentals of Kundalini yoga.

Naturopathy: Meaning, aim, objectives, misconceptions and importance of naturopathy, basic principles of naturopathy, concept of health in naturopathy, dietetic principles in naturopathy, different therapies in naturopathy.

References:

1. Goel, B. B. (2013). Secrets of Naturopathy & Yoga (UK ed.). Sterling Publications.
2. Jamieson, U. (2015). Naturopathy for Beginners: Evolve to the Alternate Form of Naturopathic Medicine for a Healthier, More Natural You (Volume 1) (1st ed.). CreateSpace Independent Publishing Platform.
3. Iyengar, B. K. S. (2006). Light on Yoga: The Classic Guide to Yoga by the World's Foremost Author (2/18/06 ed.). Harper Collins Publishers.
4. Muktibodhananda, S. (2016). Hatha Yoga Pradipika (First digital edition 2016 ed.). Yoga Publications Trust, Munger, Bihar, India.
5. Mumford, J. (2002). A Chakra & Kundalini Workbook: Psycho-Spiritual Techniques for Health, Rejuvenation, Psychic Powers & Spiritual Realization (Enlarged 2nd ed.). Llewellyn Publications.
6. Roy, R., & Charlton, D. (2019). *Embodying the Yoga Sutra*. Red Wheel Weiser.
7. Saraswati, S. N. (2012). Gheranda Samhita/Commentary on the Yoga Teachings of Maharshi Gheranda

(1st Edition). Yoga Publications Trust/Munger/India.

8. Singh Ajmer et.al, "Essentials of Physical Education." Kalyani Publishers, Ludhiana, second revised addition 2008.

DISCIPLINE SPECIFIC ELECTIVE-VII

SEMESTER-V

AT3131: F.A.-11 Kabaddi and Kho-Kho- [1 0 4 3]

Historical development of the concerned game at national and international levels, National & International bodies controlling sport and their affiliated units and Major National and International competitions, rules and their interpretations, duties of officials and measurement specifications.

Kabaddi Fundamental Skills:- in Raiding-Touching with hand, various kicks, crossing of baulk line, Crossing of Bonus line, luring the opponent to catch, Pursuing, Skills of Holding the Raider-Variations, Catching from particular position, Different catches, Luring the raider to take particular position so as to facilitate catching, catching formations and techniques, Additional skills in raiding- Bringing the antis in to particular position, Escaping from various holds, Techniques of escaping from chain formation, Combined formations in offence and defense, rules and their interpretations and duties of officials, Marking of the field/grounds **Defensive Techniques** - Position basic movements (foot work) and path of defence Basic foot work and path of raid Lead, shuffle, natural, combination of footwork and in raid Reverse step raid Defensive foot work and offensive foot work. Changing the direction during raid and its variation. Change of foot work during raid

Fundamental skills of Kho-Kho:- General skills of the game-Running, chasing, Dodging, Faking etc., Skills in chasing Correct Kho, Moving on the lanes, Pursuing the runner, Tapping the inactive runner, Tapping the runner on heels, Tapping on the pole, Diving, Judgment in giving Kho, Rectification of Foul, Skills in Running-Zigzag running, 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, rules and their interpretations and duties of officials, Marking of the field/grounds.

References:

1. Davidson, R., & Hitchcock, K. (2017). Play Better Hockey: The Essential Skills For Player Development (Second Edition, Revised And Expanded Ed.). Firefly Books.
2. Macadam, D., & Reynolds, G. (2012). Coaching Beginner Hockey Skills And Drills In A Day For Dummies. Wiley.
3. Mittal, P. (2015). Kabaddi : Rules And Regulations. Neelkanth Prakashan.
4. Muniraju, S. (2015). A Text Book On Kabaddi. Van Haren Publishing.

AT 3132: F.A.-12 Gymnastics, Aerobics and Zumba- [1 0 4 3]

Historical development of the concerned game at national and international levels, National & International bodies controlling sport and their affiliated units and Major National and International competitions, rules and their interpretations, duties of officials and measurement specifications.

Gymnastic: Fundamental Skills: Floor Exercises, Pommel Horse, Rings, Vault Table, Parallel Bars, Horizontal Bar, Forward Rolls (Tuck & Straddle), Handstands, Progressions for Backhand Spring, and Front-hand Spring, Dive Rolls, Cartwheels with straight Legs, Backhand Spring, and Front-hand Spring, Power Hurdle.

Aerobics: Introduction of Aerobics. Aerobics activities without music and equipment. Aerobics for fitness and health. Aerobics for mass demonstration. Aerobics with equipment and music. Judging and scoring in aerobics.

References:

1. Oxlade, C. (2017). Sports Skills: Cricket (Reprint ed.). Franklin Watts.

- Barth, B., & Beck, E. (2017). The Complete Guide to Fencing (2nd ed.). Meyer & Meyer Sport.
- Everett, G. (2016). Olympic Weightlifting: A Complete Guide for Athletes & Coaches (Third ed.). Catalyst Athletics, LLC.
- Low, S. (2016). Overcoming Gravity: A Systematic Approach to Gymnastics and Bodyweight Strength (Second Edition) (2nd ed.). Battle Ground Creative.
- Murphy, M., & Mejia, M. (2017). The Men's Health Gym Bible (2nd edition): Includes Hundreds of Exercises for Weightlifting and Cardio (2nd ed.). Rodale Books.
- Osborne, M. K. (2020). Gymnastics (Summer Olympic Sports) (2nd ed.). Amicus Ink.
- Low, S. (2016). Overcoming Gravity: A Systematic Approach to Gymnastics and Bodyweight Strength (Second Edition) (2nd ed.). Battle Ground Creative.

DISCIPLINE SPECIFIC ELECTIVE-VIII

SEMESTER-VI

AT3271: Sports Specialization Project in any 1 of the following Games (Football/Basketball/ Volleyball/ Archery/ Tennis/ Squash/ Badminton- [1 0 4 3]

- Basic skills of the game.
- Dimensions and preparation of playing area.
- Drills for skill development.
- Skill tests, their administration and scoring.
- Rules of the game and their interpretations.
- Officiating and coaching in the game.
- Maintenance of equipment of the game

DISCIPLINE SPECIFIC ELECTIVE-IX

SEMESTER-VI

AT3231: F.A.-13 (400m, 100mh/110mh, High Jump and Javelin Throw)- [1 0 4 3]

Introduction: Introduction of track and field events, historical development of concerned event, competitions and records of 400m, 100mh/110mh, High Jump and Javelin Throw, Marking procedure for the concerned event. **Fundamental skills /Techniques:** Start and finish of 400m, 100mh/110mh, Stride pattern from start to first hurdle, between hurdles & last hurdle to finish, hurdle clearance, takeoff, landing. Various phases of sprint & hurdle races. Approach run, takeoff, flight and landing in high jump. Grip, carry, approach, five Stride Rhythm, withdrawal stride, cross step / impulse stride, release & follow through in Javelin throw. **Officiating:** Rule of the concerned event and their interpretation, Duties of the concerned officials, measurements and equipment specifications.

References:

- Book of Rules | Official Documents. (2020). Worldathletics.Org. <https://www.worldathletics.org/about-iaaf/documents/book-of-rules>
- Bowerman, J.W, Freeman, H. W, High Performance Training for Track and Field, Leisure Press: Champaign Illinois, 1989. Champaign Illinois, 1991.
- Dunn, G.D Jr., McGill, Kevin, The Throws Manual, Tafnews Press: Mountain View, USA, 1991.
- European Athletics Championships Zurich 2014 – STATISTICS HANDBOOK (PDF), European Athletics Association, retrieved 13 August 2014
- Gambetta, Vern, The Athletics Congress's Track and Field Coaching Manual, Leisure Press: Raab, S., & Craig, D. (2015). *Evidence-Based Practice in Athletic Training* (First ed.). Human Kinetics, Inc.
- Guthrie, Mark, Coaching Track and Field Successfully, Human Kinetics: Champaign IL, 2006
- Hoshino, Atsushi The Origin of Indoor Track and Field Meets. IAAF. Retrieved on 2011-04-09.
- Runner's World. (2016). Runner's World Training Diary (2nd ed.). Wiley.
- The Ancient Olympic Games: Mythic Worship of Gods and Athletes. e-Legacies. Retrieved on 2010-05-28.
- World Athletics Competition Rules (1 November 2019).

AT3232: F.A.-14 Race Walk, 400mh, Mixed Relay and Hammer Throw- [1 0 4 3]

Introduction: Introduction of track and field events, historical development of concerned event, competitions and records of Race Walk, 400m, Mixed Relay and Hammer Throw, Marking procedure for the concerned event.

Fundamental skills /Techniques: Start and finish of Race Walk, Mixed Relay, 400m, Stride pattern from start to first hurdle, between hurdles & last hurdle to finish, hurdle clearance, take off, landing, various phases of sprint & hurdle races, length and frequency of stride and arm action. Baton exchange (Upward & Downward sweep). Grip, preliminary swings, turns, release and recovery in hammer throw. **Officiating:** Rule of the concerned event and their interpretation, Duties of the concerned officials, measurements and equipment specifications.

References:

1. Book of Rules | Official Documents. (2020). Worldathletics.Org. <https://www.worldathletics.org/about-iaaf/documents/book-of-rules>
2. Bowerman, J.W, Freeman, H. W, High Performance Training for Track and Field, Leisure Press: Champaign Illinois, 1989. Champaign Illinois, 1991.
3. Dunn, G.D Jr., McGill, Kevin, The Throws Manual, Tafnews Press: Mountain View, USA, 1991.
4. European Athletics Championships Zurich 2014 – STATISTICS HANDBOOK (PDF), European Athletics Association, retrieved 13 August 2014
5. Gambetta, Vern, The Athletics Congress's Track and Field Coaching Manual, Leisure Press: Raab, S., & Craig, D. (2015). *Evidence-Based Practice in Athletic Training* (First ed.). Human Kinetics, Inc.
6. Guthrie, Mark, Coaching Track and Field Successfully, Human Kinetics: Champaign IL, 2006
7. Hoshino, Atsushi The Origin of Indoor Track and Field Meets. IAAF. Retrieved on 2011-04-09.
8. Runner's World. (2016). Runner's World Training Diary (2nd ed.). Wiley.
9. The Ancient Olympic Games: Mythic Worship of Gods and Athletes. e-Legacies. Retrieved on 2010-05-28.

Open Elective I and II (MLC)

SEMESTER-IV and VI

AT2281: Physical, Health and Sports Education- [2 1 0 3]

Introduction to sports and physical education: Meaning, aim, objective and misconception of physical education.

Physical fitness: Meaning, importance and components of physical fitness, factors affecting physical fitness.

Fundamentals of anatomy and physiology: Classification of bones and joints, function and structure of muscles, effect of exercise on cardiovascular, respiratory and muscular system. **Psychology and sports:** Importance of sports psychology, learning and their laws, motivation and personality. **Training in sports:** Principles of sports training, conditioning and warming up, load adaptation and recovery, skill, technique and style.

Postures: Correct postures-standing and sitting and their advantages, common postural deformities. **Stress management/yoga/meditation:** Elements of yoga, introduction to asana, pranayama, meditation and yogic kriyas, common lifestyle diseases.

Sports injuries: Common sports injuries of soft tissues, joints and bones, first aid and their prevention. **Health and health education:** Dimensions of health, principles and objectives of health education. Rules and regulations of different games.

References:

1. A. Bucher, Foundation of Physical Education, St Louis: C.V. Mosby Company, 1979.
2. Kuvalayananda, Pranayama, Bombay: Popular Prakashan Publications, 1996.
3. R.H. Cox, Sport Psychology: Concepts and Applications, 7th Edition, Dubuque, IA: Wm. C. Brown Publishers, 2011.
4. J. C. Clough, Fundamental of Human Anatomy, Lea & Febiger, Philadelphia, 1971.
5. K. Park, Park's Textbook of Preventive and Social Medicine, 20th ed. Jabalpur (India): Banarsidas Bhanot; 2009.
6. Singh et. al., Essentials of Physical Education, New Delhi, Kalyani Publishers, 2003.

AT2082: Basic Concept of National Service Scheme- [2 1 0 3]

Introduction and Basic Concepts of NSS: History, aims and objectives of NSS, organizational structure, roles and responsibilities of various NSS functionaries. **NSS Programmes and Activities:** Concept of regular activities, special camping, day camps, basis of adoption of village/slums, methodology of conducting survey, financial pattern of the scheme.

Understanding Youth: Definition, profile and categories of youth, Youth as an agent of social change. **Community**

Mobilization: Mapping of community stakeholders, designing the message in the context of the problem and the culture of the community, identifying methods of mobilization. **Volunteerism and Shramdan:** Indian tradition of volunteerism, needs, importance, motivation and constraints of volunteerism, shramdan as a part of volunteerism.

Importance and Role of Youth Leadership: Meaning and types of leadership, qualities of good leaders, traits of leadership, importance and role of youth leadership. **Life Competencies:** Definition and importance of life competencies, communication, inter personal, problem solving and decision making. **Social Harmony and National Integration:** Indian history and culture, role of youth in peace building and conflict resolution, role of youth in nation building.

Youth Development Programmes in India: National youth policy, youth development programmes at the national level, state level and voluntary sector. **Citizenship:** Basic features of constitution of India, fundamentals rights and duties, human rights, consumer awareness and the legal rights of the consumer, RTI. **Family and society:** Concept of family, community and society, growing up in the family-dynamics and impact.

References:

1. National Service Scheme Manual, Govt. of India.
2. Edmond P. Bowers et. al., Promoting Positive Youth Development: Lessons from the 4-H Study, Advancing Responsible Adolescent Development, Springer International Publishing Switzerland, 2015.
3. J. C. Johari, The Constitution of India-A Politico-Legal Study, Sterling Publishers Private Limited, New Delhi, 2007.
4. U.N. Gupta, The Human Rights: Conventions and Indian Law, Atlantic Publishers and Distributors, New Delhi, 2004.
5. N. Jayapalan, Indian Society and Social Institutions, Atlantic Publishers and Distributors, New Delhi, 2001.
6. Gnana Stanley Jaya Kumar, Achieving Communal Harmony and National Integration: A Dream for Every Indian, M D Publication Pvt Ltd, New Delhi, 1997.

AT2083: Health, Hygiene and National Service Scheme- [2 1 0 3]

Health, Hygiene and Sanitation: Definition needs and scope of health education, food and nutrition, safe drinking water, water borne diseases and sanitation (Swachh Bharat Abhiyan). **Youth Health:** Healthy lifestyles, HIV AIDS, drugs and substance abuse, home nursing, first aid. **Youth and Yoga:** History, philosophy and concepts of yoga, myths and misconceptions about yoga, different yoga traditions and their impacts, yoga as a preventive, yoga as a tool for healthy lifestyle.

Environment Issues: Environment conservation, enrichment and sustainability, climate change, waste management, natural resource management. **Disaster Management:** Introduction to disaster management, classification of disasters, role of youth in disaster management.

Project Cycle Management: Project planning, implementation, monitoring and evaluation- impact assessment.

Documentation and Reporting: Collection and analysis of data, preparation of documentation/reports, dissemination of documents/ reports. **Entrepreneurship Development:** Definition and meaning, qualities of good entrepreneur, steps/ways in opening an enterprise, role of financial and support service institutions.

Youth and Crime: Sociological and psychological factors influencing youth crime, peer mentoring in preventing crimes, awareness about anti-ragging, cyber-crime and its prevention, juvenile justice. **Civil/self-defense:** Civil defense services, aims and objectives of civil defense, needs for self-defense training.

Resource mobilization: Writing a project proposal, establishment of SFUs. **Additional Life Skill:** Positive thinking, self-confidence and self-esteem, setting life goals and working to achieve them, management of stress including time management.

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AT2084: National Cadet Corps- [2 1 0 3]

Introduction to NCC: Aims and Objectives of NCC, Organisation & Training and NCC Song, Incentives, **National Integration & Awareness:** Religions, Culture, Traditions and Customs of India, Importance and Necessity of National Integration, Freedom Struggle and Nationalist Movement in India, Problems / Challenges of National Integration, National Integration Council, Images/ Slogans for National Integration,

Personality Development and Leadership: Meaning of Personality, Types of Personality, Factors Influencing Personality, **Communication:** Meaning, Types and Barrier of Communication, **Leadership** Meaning and Types of Leadership, Importance of Group / Team Work, **Health & Hygiene:** Structure & functioning of the human body, Hygiene & Sanitation (Personal & Food hygiene), Basics of Home Nursing & First-Aid, Wounds & Fractures, Introduction to Yoga & Exercises,

Adventure Training: Para Sailing, Slithering, Rock Climbing, Cycling/ Trekking, **Drill:** General and Words of Command, Sizing, Forming up in Three Ranks, Numbering, Open and Close Order March and Dressing, Saluting at the Halt, Getting on Parade, Dismissing and Falling Out, Marching, Length of Pace and Time of Marching in Quick Time and Halt, Slow March and Halt, Turning on the March and Wheeling, Saluting at the March, Individual Word of Command,

Environment Awareness and Conservation: Natural Resources-Conservation & Management, Water Conservation & Rainwater Harvesting, Waste Management, Pollution Control: Water, Air, Noise, Soil, Wildlife Conservation: Projects of India.

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