

Allahabad State University

Allahabad

Syllabus of
Physical Education

M.A./M.Sc. Physical Education
Two Year Four Semester

Prepared by:
Board of Study Members

**Minutes of the meeting in Board of Studies in Physical Education in Conference Room,
Vice Chancellor's office, Allahabad State University on 11th June 2017, at 11:00 am.**

Members Present

Prof. Sushma Ghildyal	(External Member)
Prof. B.B.Singh	(External Member)
Prof. Archana Chahal	(External Member)
Prof. S.K. Gautam	(External Member)
Dr. Ish Naryan Upadhya	(Internal Member)
Dr. P.K. Pachaury	(Internal Member)
Dr. S.D. Maurya	(Convener)

In the First meeting of Board of Studies in Physical education for the year 2017, the Convener welcomed all the member of the Board of Studies.

Agenda 1: To finalize the Syllabus of B.P.Ed, M.P.Ed. Professional Courses and BA/BSc. and MA/MSc in Physical Education (non .Professional Courses).

Resolution 1: The members discussed the Syllabus of B.P.Ed and M.P.Ed as prescribed by NCTE curriculum framework 2014. The Board Members resolved that the Syllabus be approved with minor modifications as per the administrative feasibility of Allahabad State University, Allahabad. The modification discussed were:

- I. Distribution of marks for theory and practical both will be 60% external evaluation and 40% internal evaluation.
- II. The Syllabus on B.Sc. (Agriculture) First Semester was also discussed and was resolved that:
 - a. Copy of Syllabus of B.A. in Physical Education which is already received in Allahabad State University, Allahabad be approved with minor modifications.
 - b. The committee members unanimously resolved that Prof. Archana Chahal be authorized to prepare draft syllabus of M.A./M.Sc. in Physical Education, which will be circulated among the boards members and after incorporating their suggestions (if any) shall be treated as approved.
 - c. The committee members resolved that Dr. Pawan Kumar Pachaury be authorized to prepare draft syllabus of B.Sc. (Ag.) Physical Education (First Semester), which will be circulated among the board members and after incorporating their suggestions (if any) shall be treated as approved.

The meeting ended with thanks to Chair/Convener.


(Prof. Sushma Ghildyal)
External Member


(Prof. B.B. Singh)
External Member


(Prof. Archana Chahal)
External Member


(Prof. S.K. Gautam)
External Member


(Dr. Ish Naryan Upadhya)
Internal Member


(Dr. P.K. Pachaury)
Internal Member


(Dr. S.D. Maurya)
Convener

BOS First Meeting Board of Studies in Physical Education 11 June, 2017

SYLLABUS of MA /M.Sc. IN PHYSICAL EDUCATION

Detailed Syllabus of the MA /M.Sc. IN PHYSICAL EDUCATION (PE)

MA/ M.Sc. PE Semester- I

Part – A	Theory Courses
	Core
PE-101	Research Process in Physical Education and Sports Sciences
PE-102	Applied Statistics in Physical Education and Sports Sciences
PE-103	Test, Measurement and Evaluation in Physical Education & Sports Sciences
	Elective
PE-104 / PE-105	(a) Sports Journalism and Mass Communication (b) Sports Engineering
Part – B	Sports Practicum Courses
PE-106	Sports Practical & Theory I (Select any one from the followings on the basis of feasibility) Track & Field / Gymnastics / Swimming / Combative Sport/ Yog / Indigenous Sport/ Racket Game/ Team Game

MA/ M.Sc. PE Semester-II

Part – A	Theory Courses
	Core
PE-201	Sports and Exercise Physiology
PE-202	Scientific Principles of Sports Training
PE-203	Yogic Sciences
	Elective
PE-204 / PE-205	(a) Sports Technology (b) Sports Management
Part – B	Sports Practicum Courses
PE-206	Sports Practical & Theory – II (Select any one from the followings on the basis of feasibility) Track & Field / Gymnastics / Swimming / Combative Sport/ Yog / Indigenous Sport/ Racket Game/ Team Game

MA/ M.Sc. PE Semester -III

Part – A	Theory Courses
	Core
PE-301	Health Education and Sports Nutrition
PE-302	Sports Psychology
PE-303	ICT & Education Technology in Physical Education
	Elective
PE-304 / PE-305	a. Sports Medicine b. Physical Fitness and Wellness
Part – B	Sports Practicum Courses
PE-306	Sports Practical & Theory – III (Select any one from the followings on the basis of feasibility) Track & Field / Gymnastics / Swimming / Combative Sport/ Yog / Indigenous Sport/ Racket Game/ Team Game

MA/ M.Sc. PE Semester -IV

Part – A	Theory Courses
	Core
PE-401	Kinesiology and Sports Biomechanics
PE-402	Gender, Disability & Inclusive Sport Education
PE-403	Athletic Care & Rehabilitation
	Elective
PE-404 / PE-405	a. Dissertation* b. Curriculum Designs in Physical Education
Part – B	Sports Practicum Courses
PE-406	Sports Specialization: Coaching Plan – (Select any one from the previous semesters on the basis of feasibility)

Semester I
PART – A: THEORY COURSES
PE-101

Course Title: RESEARCH PROCESS IN PHYSICAL EDUCATION AND SPORTS SCIENCES

THE COURSE OBJECTIVES ARE:

1. To develop understanding of the basic framework of research process.
2. To identify appropriate research topics.
3. To identify various sources of information for literature review and data collection.
4. Select and define appropriate research problem, parameters and research questions.
5. To develop an understanding of various research designs and techniques.
6. Write a research proposal and report.
7. Organize and conduct a scientific research in a more appropriate manner
8. To develop an understanding of the ethical dimensions of conducting applied research.

THE STUDENT LEARNING OUTCOMES ARE:

1. To define research and describe the research process and research methods.
2. To understand the research context within the area of physical Education and sports.
3. To understand the processes and requirements for conducting successful research in physical education and sports.
4. Understand and apply basic research methods.
5. Students use print and electronic library resources effectively and appropriately.
6. To understand the process of sampling, the uses of questionnaires as data-gathering instruments, how a survey is carried out in terms of process and method, the uses of surveys and to be able to capture their own data.
7. Understand and apply basic research methods including research design, data analysis, and interpretation.
8. Students develop testable hypotheses, differentiate research design, evaluate aptness of research conclusions, and generalize them appropriately.
9. Students design and conduct quantitative or qualitative research studies in laboratory or field settings.
10. Students use research data to formulate or evaluate new research questions, using reason and persuasion in a logical argument.
11. To know how to apply the basic aspects of the research process in order to plan and execute a research proposal and research report.
12. To be able to present, review and publish scientific articles.

UNIT – 1: INTRODUCTION

- Meaning and Definition of Research –
- Need, Nature and Scope of research in Physical Education.
- Classification of Research, Location of Research Problem,
- Criteria for selection of a problem,
- Identification of research questions,
- Research Objectives,
- Limitation, Delimitation, Hypothesis
- Qualities of a good researcher

UNIT – II: METHODS OF RESEARCH

- Descriptive Methods of Research: Survey Study, Case study,

- Introduction of Historical Research:
Steps in Historical Research, Sources of Historical Research:
- Primary Data and Secondary Data,
- Historical Criticism: Internal Criticism and External Criticism.
- Experimental Research – Meaning, Nature and Importance,
- Meaning of Variable, Types of Variables.
- Experimental Design - Single Group Design, Reverse Group Design, Repeated Measure Design, Static Group Comparison Design, Equated Group Design, Factorial Design.
- Tools & Techniques of Data Collecting

UNIT – III: SAMPLING

- Meaning and Definition of Sample and Population.
- Types of Sampling; Probability Methods; Systematic Sampling, cluster sampling, Stratified Sampling.
- Sampling Techniques,
- Area Sampling
- Multistage Sampling.
- Non- Probability Methods;
- Convenience Sample,
- Judgment Sampling,
- Quota Sampling.

UNIT – IV: RESEARCH PROPOSAL AND RESEARCH REPORT

- Defining Research Project
- Writing a Research Proposal and Research Report,
- Footnotes & Bibliography, E-Referencing
- Ethical Issues in Research : Areas of Scientific Dishonesty, Ethical issues regarding copyright. Responsibilities of Researcher, Working Ethics with Faculty, Protecting Human Participants,
- Plagiarism

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test, Project Work, Assignments, Presentations

TEXT & REFERENCES:

- Best & Kahn (2003) Research in Education, 10th Ed. New Jersey; Prentice Hall, Inc.
- Clarke David. H & Clarke H, Harrison (1984) Research processes in Physical Education, New Jersey; Prentice Hall Inc.
- Craig Williams and Chris Wragg (2006) Data Analysis and Research for Sport and Exercise Science, Londonl Routledge Press
- Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illinois: Human Kinetics;
- Kamlesh, M. L. (1999) Research Methodology in Physical Education and Sports, New Delhi

- Moses, A. K. (1995) Thesis Writing Format, Chennai; Poompugar Pathippagam
- Rothstain, A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc.
- Subramanian, R, Thirumalai Kumar S & Arumugam, C (2010) Research Methods in Health, Physical Education and Sports, New Delhi; Friends Publication
- Moorthy A. M. Research Processes in Physical Education (2010); Friends Publication, New Delhi

Semester I
PART – A: THEORY COURSES
PE-102

Course Title: APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS

THE COURSE OBJECTIVES ARE:

1. To completely describe a data set, using appropriate descriptive statistics.
2. To interpret a set of descriptive statistics and understand the limitations of each measure.
3. Students shall be able to use and apply a wide variety of specific statistical methods.
4. Students shall know how to organize, manage, and present data.
5. Show ability to explore and organize data for analysis.
6. Students shall be able to use and apply a wide variety of specific statistical methods.
7. Demonstrate understanding of the properties of probability and probability distributions.
8. Demonstrate understanding of the probabilistic foundations of inference.
9. Apply inferential methods relating to the means of Normal distributions.

STUDENT LEARNING OUTCOMES:

1. Know how to organize, manage, and present data.
2. Explore and organize data for analysis.
3. Use and apply a wide variety of specific statistical methods.
4. Demonstrate understanding of the properties of probability and probability distributions.
5. Demonstrate understanding of the probabilistic foundations of inference.
6. Apply inferential methods relating to the means of Normal distributions.
7. Understand the concept of the sampling distribution of a statistic, and in particular describe the behavior of the sample mean.
8. Effectively communicate results of statistical analysis.
9. Demonstrate understanding of statistical concepts embedded in their courses.
10. Demonstrate proficiency in analyzing data using methods embedded in their courses.
11. Demonstrate ability to select appropriate methodologies for analysis based on properties of particular data sets.

UNIT I

- Meaning and Definition of Statistics.
- Need and importance of Statistics
- Types of Statistics.
- Meaning of the terms: Population, Sample,
- Data, Kinds of data. Variables: Discrete, Continuous.
- Parametric and non-parametric statistics.

UNIT II

- Meaning, uses and construction of frequency table
- Meaning, Purpose, calculation and advantages of :
Range, Measures of central tendency –Mean, median and mode.
Quartile Deviation, Mean Deviation, Standard Deviation, Probable Error.
Normal Curve: Meaning of probability – Principles of normal curve – Properties of normal curve.
Divergence form normality – Skewness and Kurtosis.

UNIT III

- Sample Distribution of Means, Standard Error of Mean
- Testing of Hypothesis- Region of Acceptance & Region of Rejection of Null and Alternative Hypothesis
- Level of Significance
- Type I and Type II Errors,
- One Tailed and Two Tailed test
- Degrees of Freedom

UNIT IV

- Tests of significance: Independent ‘t’ test, Dependent ‘t’ test, chi - square test,
- Level of confidence and interpretation of data,
- Meaning of correlation - co-efficient of correlation
- Calculation of co-efficient of correlation by the product moment method and rank difference Method.
- Concept of ANOVA and ANCOVA, Post-hoc tests-LSD and Scheffe

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreaching Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test/ Project Work/ Assignments/ Presentations/ Practical Work /Theory lesson plan

TEXT & REFERENCES:

- Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc.
- Clark D.H. (1999) Research Problem in Physical Education 2nd edition, Eaglewood Cliffs, Prentice Hall, Inc.
- Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis;Human Kinetics;
- Kamlesh, M. L. (1999) Research Methodology in Physical Education and Sports, New Delhi
- Rothstain A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc.
- Sivaramakrishnan. S. (2006) Statistics for Physical Education, Delhi; Friends Publication
- Thirumalaisamy (1998)
- Statistics in Physical Education, Karaikudi, Senthil Kumar Publications

Semester I
PART – A: THEORY COURSES
PE-103

Course Title: TEST, MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION

THE COURSE OBJECTIVES ARE:

1. To develop concepts related to Test, Measurement & Evaluation;
2. To construct a strong basis in the evaluation techniques through the various test and measurements method used in physical education.
3. To analyze the physical ability and performance of an individual in various sports.
4. To provide scientific techniques in selection and talent identification through various evaluation and grading process applicable in physical education and sports.
5. To develop the skills and techniques for construction of new tests for various need related to specific Sports Skills.

STUDENT LEARNING OUTCOMES ARE:

1. Explain the basics of measurement and evaluation of various test and measurement techniques.
2. Develop the concepts of measurement and evaluation in physical education and sports
3. Develop ability to construct new tests for various need related to Physical Education and Sports with scientific authenticity
4. To analyze various test and performance related to physical education

UNIT I: Introduction

- Meaning and Definition of Test, Measurement and Evaluation
- Need and Importance of Measurement and Evaluation.
- Criteria for Test Selection – Scientific Authenticity.
- Meaning, definition and establishing Validity, Reliability, Objectivity.
- Norms – Administrative Considerations.

UNIT II: Selection of Construction of Tests

- Criteria of Test Selection
- Factors Affecting Scientific Authenticity
- Procedure to establish Scientific Authenticity
- Construction of Test – Knowledge Test & Skill Tests
Guidelines for constructing objectives and subjective test (Alternate Choice (True/False), Multiple Choice, Short Answer & Matching Items)
- Administration of Testing programme, its procedure and follow up

UNIT III: Motor & Physical Fitness Tests

- Meaning and Definition of Motor Fitness and Physical Fitness.
- Tests for Motor Fitness;
- Barrow Motor Ability Test –
- Muscular Fitness – Kraus Weber Minimum Muscular Fitness Test.
- AAHPERD Health Related Fitness Battery (revised in 1984),
- ACSM Health Related Physical Fitness Test,
- Roger's Physical Fitness Index.
- Harvard step test. 12 minutes Run / Walk Test,

- Multi-stage Fitness Test (Beep test)
- Test of Coordinative Ability; Speed; Power

UNIT IV: Anthropometric and Aerobic-Anaerobic Tests

- Physiological Testing:
- Aerobic Capacity:
 - The Bruce Treadmill Test Protocol,
 - 1.5 Mile Run test for college age males and females.
- Anaerobic Capacity: Margaria-Kalamen test, Wingate Anaerobic Test
- Anthropometric Measurements:
 - Method of Measuring Height: Standing Height, Sitting Height.
 - Method of measuring Circumference: Arm, Waist, Hip, Thigh.
 - Method of Measuring Skin folds: Triceps, Sub scapular, Suprailiac

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

PRACTICUM: Tests of Unit III & IV should be conducted practically also.

ASSESSMENT RUBRIC: Classroom Test/ Project Work/ Assignments/ Presentations/ Practical Work / Theory lesson plan

TEXT & REFERENCES:

- Bangsbo, J. (1994). Fitness training in football: A scientific approach. Bagsvaerd, Denmark: Ho+Storm.
- Barron, H. M., & Mchee, R. (1997). A practical approach to measurement in physical education. Philadelphia: Lea and Febiger.
- Barron, H.M. & Mchee, R. (1997). A Practical approach to measurement in physical education. Philadelphia: Lea and Febiger.
- Kansal, D.K. (1996). Test and measurement in sports and physical education. New Delhi: D.V.S. Publications.
- 2 years B.P.Ed Curriculum | 40
- Mathews, D.K., (1973). Measurement in physical education, Philadelphia: W.B.SoundersCompnay.
- Pheasant, S. (1996). Body space: anthropometry, ergonomics and design of work. Taylor & Francis, New York.
- Phillips, D. A., & Hornak, J. E. (1979). Measurement and evaluation in physical education. New York: John Willey and Sons.
- Sodhi, H.S., & Sidhu, L.S. (1984). Physique and selection of sports- a kinanthropometric study. Patiala: Punjab Publishing House.

Semester I

PART – A: THEORY COURSES

PE-104

Course Title: SPORTS JOURNALISM AND MASS COMMUNICATION

COURSE OBJECTIVES:

1. To apprise the students about the origin and evolution of journalism and mass media.
2. To synthesize a basic concept of reporting and editing.
3. To appraise the varied aspects of advertising.

STUDENT LEARNING OUTCOMES:

1. Apply the concept of reporting and editing.
2. Illustrate and apply the advertising concepts.
3. Interpret the concept of journalism and mass media

UNIT – I: Introduction to Sports Journalism & Mass Communication

- Meaning, Definition & Evolution of Sports Journalism. Ethics of Journalism – Canons of journalism-
- Sports Ethics and Sportsmanship, Reporting Sports Events, National and International Sports News Agencies, Definition, meaning, scope and importance of Sports journalism and its History

UNIT – II: Mass Media

- Introduction to mass communication - The concept of mass media - Mass media in India and its present status,
- Mass media institutions in India – Government media units - Press registrar of India, Press council of India - Indian news agencies media educational institutions, The concept of journalism - the function of press - Press freedom and responsibility and the theories of press - Current trends in journalism. Sports Photography: Equipment- Editing – Publishing. Mass Media in Journalism: Radio and T.V. Commentary

UNIT – III: Report & Editing

- Reporting, Functions, responsibilities and qualities of reporter - Functional differences of reporters – Special correspondents, foreign correspondents, columnists, free lancers, Roving Reporters, Structure of Advertising - Functions of advertising, Psychology of advertising,
- Types of advertising – Advertising media, Structure of advertising agency. Editing – Fundamentals of copy editing – Copy reading and proof reading symbols – Rewriting techniques – Copy fitting - - Space saving techniques – Style sheet – Readability – Glossary, Writing news headlines in Newspaper and Magazines – Modern trends of headlines writing – Electronic news editing – picture editing – Outline writing – Editorial writing – Types of editorials and analysis of editorials.

UNIT – IV (Practical)

1. Preparation of General news reporting and sports reporting.
2. Methods of editing a Sports report.
3. Evaluation of Reported News.
4. Interview with and elite Player and Coach.
5. Practical assignments to observe the matches and prepare report and news of the same;
6. Visit to News Paper office and TV Centre to know various departments and their working.

7. Preparation of Portfolio of newspaper cuttings of sports news (national & international) for the Semester.

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test / Project Work / Assignments/ Presentations / Practical Work/Portfolio / Theory lesson plan

TEXT & REFERENCE:

- Ahiya B.N. (1988) Theory and Practice of Journalism: Set to Indian context Ed3. Delhi :
- Surjeet Publications
- Ahiya B.N. Chobra S.S.A. (1990) Concise Course in Reporting. New Delhi: Surjeet Publication
- Bhatt S.C. (1993) Broadcast Journalism Basic Principles. New Delhi. Haranand Publication
- Dhananjay Joshi (2010) Value Education in Global Perspective. New Delhi: Lotus Press.
- Kannan K (2009) Soft Skills, Madurai: Madurai: Yadava College Publication
- Mohit Chakrabarti (2008): Value Education: Changing Perspective, New Delhi: Kanishka Publication.
- Billings, A., Butterworth, M., & Turman, P. (2012). Communication and sport. Thousand Oaks, Calif.: SAGE.ISBN-13: 978-1412972932 ISBN-10: 1412972930
- Billings, A. (2014) Routledge handbook of sport and new media. Routledge ISBN-13: 978-0415532761 ISBN-10: 0415532760
- Billings, A., Butterworth, M., & Turman, P. (2014) Communication and sport.ISBN-13: 978-1452279138 ISBN-10: 1452279136
- Sandvoss, C., Real, M., & Bernstein, A. (2012). Bodies of discourse. New York, NY: Peter Lang.ISBN-13: 978-1433111730 ISBN-10: 143311173X
- Deninger, D. (2012). Sports on television New York: Routledge.ISBN-10: 0415896762 ISBN-13: 978-0415896764

Semester I
PART – A: THEORY COURSES
PE-105
Course Title: SPORTS ENGINEERING

COURSE OBJECTIVES:

1. Define the relationship between sports and engineering.
2. To apprise different materials used in sports.
3. To explain concept related to sports dynamics and facility management.
4. Describe the importance of ethics within both sports and manufacturing.
5. Identify technologies and sustainable solutions to manufacturing apparel.
6. Assess and understand the manufacturing techniques within two companies.
7. Relate the non-engineering sports world to the knowledge and technologies that engineering has developed.

STUDENT LEARNING OUTCOMES:

1. Apply the concept of engineering and technology in sports.
2. Differentiate different materials used in sports.
3. Demonstrate and prepare programmes related to sports dynamics and facility management.

UNIT I: Introduction to sports engineering

- Meaning of sports engineering,
- Equipment and facility designing and sports related instrumentation and Measurement
- Materials of Protection – discussion of the materials that are used for sports gear and protection
- Performance of Surface Materials – discussion of the different surfaces that sports are played on and why; how can these materials make a difference from sport to sport.
- Shoe Materials – discuss the design necessities that go into shoe materials and manufacturing and how that differs from sport to sport
- Balls and Ballistics – discuss the difference of the equipment that is used for specific sports and basic aerodynamic principles
- Performance of Surface Materials – discussion of the different surfaces that sports are played on and why; how can these materials make a difference from sport to sport.

UNIT II: Sports Dynamics

- Concepts of internal force, axial force, shear force, bending movement, torsion, energy method to find displacement of structure, strain energy.
- Biomechanics of daily and common activities –Gait, Posture, and Body levers, ergonomics,
- Mechanical principles in movements such as lifting, walking, running, throwing, jumping, pulling, pushing etc., Motion coordinate system, Kinetics of particles Newton's laws of Motion, Work, Energy, Impulse and momentum

UNIT III: Building and Maintenance

- Sports Infrastructure: Gymnasium, Pavilion, Swimming Pool, Indoor Stadium, Out-door Stadium, Play Park, Academic Block, Administrative Block, Research Block, Library, Sports Hostels, etc. Requirements: Air ventilation, Day light, Lighting arrangement, Galleries, Store rooms
- Office, Toilet Blocks (M/F), Drinking Water, Sewage and Waste Water disposal system,
- Changing Rooms (M/F), Sound System (echo-free),

- Internal arrangement accords to need and nature of activity to be performed, Corridors and Gates for free movement of people, Emergency provisions of lighting, fire and exits, Eco-friendly outer surrounding. Maintenance staff, financial consideration

UNIT IV

- Understanding the process of construction & requirements there of Building process:- design phase (including brief documentation), construction phase, functional (occupational) life. re-evaluation, refurbish, demolish.
- Maintenance policy, preventive maintenance, corrective maintenance, record and register
- Gymnasium. Pavilion, Swimming Pool, Indoor Stadium. Out-door designs, development & maintenance

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test / Project Work / Assignments / Presentations / Practical Work / Theory lesson plan

Text & Reference:

- Subic, A., & Haake, S. (2000). The engineering of sport research, development and innovation. Malden, Mass.: Blackwell Science. ISBN-10: 0632055634 ISBN-13: 978-0632055630
- Franz K. F. et. al., Editor, Routledge Handbook of Sports Technology and Engineering (Routledge, 2013)
- Steve Hake, Editor, The Engineering of Sport (CRC Press, 1996)
- Franz K. F. etc. al., Editor The Impact of Technology on Sports II (CRC Press, 2007)
- Helge N., Sports Aerodynamics (Springer Science & Business Media, 2009)
- Youlin Hong, Editor Routledge Handbook of Ergonomics in Sport and Exercise (Routledge, 2013)
- Jenkins M., Editor Materials in Sports Equipment, Volume I (Elsevier, 2003)
- Colin White, Projectile Dynamics in Sport: Principles and Applications
- Eric C. et al., Editor Sports Facility Operations Management (Routledge, 2010).

Semester I
PART – B
PE-106
SPORTS PRACTICUM COURSES I

PE- 106 (A) TRACK AND FIELD (B) GYMNASTIC (C) SWIMMING (D) COMBATIVE SPORT: BOXING/JUDO/TAEKWONDO/MARTIAL ART & KARATE/ WRESTLING (E) INDIGENOUS SPORT: MALKHAMB/ KABADDI/ KHO-KHO (F) TEAM GAME: BASKETBALL/ CRICKET/ FOOTBALL/ HANDBALL / HOCKEY/ VOLLEYBALL (G): RACKET GAME: BADMINTON/ TABLE TENNIS/ TENNIS/ SQUASH

ESSENCE OF THE COURSE

The course of Sports – I is designed to provide an opportunity to teacher educators to learn the basic techniques of the game/sport and are not only able to display them but also systematically teach them.

COURSE OBJECTIVES:

1. To define and acquaint training preparation of Game/Sport
2. To employ the rules and regulation of Game/Sport
3. To emphasis on preparation for the Game/Sport.
4. To acquaint the student with progressive teaching stages of fundamentals skills of Game/Sport.
5. To orient & employ the rules and regulation in organization of competition in Game/Sport.

STUDENT LEARNING OUTCOMES:

After Completion of the course the students shall be able to:

1. Gain knowledge of the Game/Sport.
2. Learn the layout and marking for the Game/Sport.
3. Demonstrate various drills & lead up activities related to Game/Sport.
4. Develop the skills to teach rules, fundamentals and strategies of Game/Sport.

COURSE CONTENTS:

(General guidelines for development of required course contents in particular game/sport are given below)

UNIT – 1: Introduction

- Historical development of the game/sport at national and international levels
- National Bodies controlling game/sport and their affiliated units.
- International Bodies controlling game/sport and their affiliated units.
- Major National and International competitions in Game/Sport
- Layout and marking of play filed/ground/courts and measurement of equipments used in Game/Sport.

UNIT – II: Techniques/Skills development

- Classification of techniques/skills.
- Technique/skill training: Preparatory, Basic, Supplementary exercises.
- Identification & Correction of faults.
- Training for mastery in technique/skill
- Recreational and lead-up activities.
- Warm-up and cool down for game/sports.

UNIT –III: Officiating:

- Mechanics of officiating.
- Qualities of good official.
- Duties of official (pre, during and post game)
- Rules & their interpretations.

UNIT – IV: Training (Means & Method)

- Training methods and means for the development of motor abilities (Strength, Speed, Endurance and Flexibility)
- Basic Concept of preparation of training schedules.
- Tactical training in game/sport.
- Psychological preparation required during competition in game/sport.
- Preparation of short term and long term training plans in game/sport.
- Periodization in training of players in game/sport.
- General/specific fitness tests and performance/skill test in game/sport.

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test, Performance Test, Project Work, Assignments, Presentations, Practical Work

SUGGESTED READINGS

Latest Official Rule Books of International Federations of particular game/sport and Coaching manuals will be utilized.

Semester II
PART – A: THEORY COURSES
PE-201

Course Title: SPORTS AND EXERCISE PHYSIOLOGY

THE COURSE OBJECTIVES ARE:

- To assess basic concepts of exercise physiology
- To employ students to apply the knowledge of energy systems during exercise.
- To explain the effect of environment and ergogenic aids on exercise and training.
- Develop a thorough understanding of the relationship between physical activity and health.
- To develop the understanding of the physiological processes.

STUDENT LEARNING OUTCOMES:

- Describe and apply the fundamental and advanced concepts of exercise physiology.
- Define and describe the term exercise physiology
- Recognize the energy system for aerobic and anaerobic components of exercise.
- Summarize the physiological basis of physical fitness, physical training, health and wellness.
- Discover the nutritional aspect of fitness and performance.
- Comprehend the physiological changes & adaptations during exercise in different environmental conditions

UNIT I: Introduction to Sports & Exercise Physiology and Muscular system

Meaning, Definition & Historical Development of Sports & Exercise Physiology

- Macro & Micro Structure of the Skeletal Muscles, Chemical Composition, Sliding Filament theory of Muscular Contraction. Types of Muscle fiber, Muscle Tone, Chemistry of Muscular Contraction –
- Heat Production in the Muscle, Effect of exercises and training on the muscular system

UNIT II: Cardio Respiratory System and Exercise

- Blood Supply to the Heart, Cardiac Cycle, Stroke Volume, Cardiac Output, Heart Rate, Factors Affecting Heart Rate, Cardiac Hypertrophy
- Effect of exercises and training on the Cardio-vascular system.
- Mechanics of Breathing, Minute Ventilation – Ventilation at Rest and During Exercise
- Diffusion of Gases, Exchange of Gases in the Lungs (external respiration)
- Exchange of Gases in the Tissues (internal respiration), Control of Ventilation
- Ventilation and the Anaerobic Threshold. Second Wind, Oxygen Debt
- Lung Volumes and Capacities
- Effect of exercises and training on the respiratory system

UNIT III: Metabolism and Energy Transfer

- Metabolism – ATP – PC or Phosphagen System
- Anaerobic Metabolism; Aerobic Metabolism
- Aerobic and Anaerobic Systems during Rest and Exercise.
- Short Duration High Intensity Exercises
- High Intensity Exercise Lasting Several Minutes

- Long Duration Exercises

UNIT IV: Environment, Sports & Exercise

- Sports/Exercise in Hot and Cold Conditions
- Thermoregulatory Mechanism
- Physiological response, Health Risk, Associated with Exposure to heat and cold.
- Acclimatization: Sports & Exercise - Training in High Altitude
- Physiological response and associated health risk.

PRACTICUM: (PHYSIOLOGICAL ASSESSMENT)

- Measurement of resting heart rate, immediately before and after activity and during activity.
- Measurement of Blood Pressure by Sphygmomanometer
- Measurement of Vital Capacity, and Peak Flow Rate.
- Assessment of Respiratory Rate.
- Measurement of Body Fat
- BMI method
- Assessment of Body Composition by Skinfold caliper method
- Assessment of Cardio Respiratory Fitness. through various field methods

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test, Project Work, Assignments, Presentations

TEXT & REFERENCES:

- Amrit Kumar, R, Moses. (1995). Introduction to Exercise Physiology. Madras: PoompugarPathipagam.
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- Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co.
- Richard, W. Bowers. (1989). Sports Physiology. WMC: Brown Publishers.
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- Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Subject Publications.
- Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication.
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Semester II
PART – A: THEORY COURSES
PE-202

Course Title: SCIENTIFIC PRINCIPLES OF SPORTS TRAINING

COURSE OBJECTIVES:

- To provide knowledge and concept of sports training.
- To develop an understanding of the technical and tactical training.
- To provide the role of sport sciences to achieve the excellence

UNIT I: Introduction Sports training

- Definition – Aim, Characteristics, Principles of Sports Training.
- Training Load: Types of Training Load, Factors of Training Load, Load and Adaptation
- Over Load: Definition, Causes of Over Load, Symptoms of Overload
- Phases and Means of Recovery

UNIT II: Physical Fitness Components & their Development (Strength, Speed & Endurance)

- Strength: Meaning, Definition & Methods to improve Strength: Weight Training, Isometric, Isotonic, Circuit Training
- Speed: Meaning, Definition & Methods Develop Speed: Repetition Method, Downhill Run, Parachute Running, Wind Sprints, Endurance
- Endurance: Meaning, Definition & Methods Continuous Method, Interval Method, Repetition Method, Cross Country, Fartlek Training

UNIT III: Physical Fitness Components & their Development (Flexibility & Coordinative abilities) and Techniques & Tactics

- Flexibility: Meaning, Definition & Methods to Improve the Flexibility- Stretch and Hold Method, Ballistic Method, Special Type Training: Plyometric Training.
- Coordinative abilities: Methods to improve Coordinative abilities.
- Meaning & Definition of Technique
- Meaning & Definition of Strategy & Tactics
- General & Applied Tactics and their implication

UNIT IV: Training Plan & Introduction to Doping

- Training Plan: Meaning & Importance, Micro-Cycle, Macro-Cycle, Meso-Cycle
- Short Term Plan and Long Term Plans - Periodization: Meaning, Single, Double and Multiple Periodization,
- Preparatory Period, Competition Period and Transition Period
- Definition of Doping & Education, Side effects of drugs, IOC list of doping classes and methods, Prescription only medicines (POMs) & Controlled drugs (CDs).

TEXT & REFERENCES:

- Beotra Alka. (2000). Drug Education Handbook on Drug Abuse in Sports. Delhi: Sports Authority of India.
- Bunn, J.N. (1998) Scientific Principles of Coaching, New Jersey Engle Wood Cliffs, Prentice Hall Inc. Cart, E. Klafs&Daniel, D. Arnheim (1999) Modern Principles of Athletic Training St. Louis C. V. Mosphy Company
- Daniel, D. Arnheim (1991) Principles of Athletic Training, St. Luis, Mosby Year Book
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Semester I
PART – A: THEORY COURSES
PE-203
Course Title: YOGIC SCIENCES

COURSE OBJECTIVES:

1. To appraise an understanding of the principles of yogic practices
2. To Acquaint with various types of Asanas, Pranayam, Kriyas
3. To integrate sports with yoga for performance enhancement

STUDENT LEARNING OUTCOMES:

1. Differentiate between various paths of yoga
2. Apply and demonstrate various benefits of yoga to be applied in the field of sports
3. Relate Yoga with health and wellness.

UNIT I: Introduction to Yoga

Meaning and Definition of Yoga, Astana Yoga: Yama, Niyama, Asana, Pranayama, Prathyahara, Dharana, Dhyana, Samathi. Concept of Yogic Practices: Principles - Breathing -Awareness- Relaxation. Sequence- Counter pose –Time – Place – Blanket – Clothes – Bathing - Emptying the bowels – Stomach – Diet - No straining – Age - Contra-indications - Inverted asana – Sunbathing.

UNIT II:

Loosening exercises: Techniques and benefits. Asanas: Types- Techniques and Benefits. Yogasans and its values. Surya namaskar: Methods and benefits. Pranayama: Types- Methods and benefits. Nadis : Meaning, methods and benefits. Chakras: Major Chakras - Benefits of clearing and balancing Chakras.

UNIT III:

Yoga and Sports: Yoga Supplemental Exercises -Yoga Compensation Exercises- Yoga Regeneration Exercises- Power Yoga. Role of Yoga in Psychological Preparation of athlete: Mental Wellbeing, Anxiety, Depression, Concentration, Self-Actualization. Effect of Yoga on Physiological System: Circulatory, Skeletal, Digestive, Nervous, Respiratory, Excretory Systems. International Day of Yoga, Common Yoga Protocol suggested by AYUSH

Unit IV: PRACTICUM

1. Asana (Sitting, Standing, Bending & Twisting)
2. Pranayama (5 types)
3. Mudras: Meaning, Techniques & Benefits
4. Shat Kriyas- Meaning, Techniques and Benefits
5. Bandas: Meaning, Techniques & Benefits
6. Meditation: Meaning, Techniques & Benefits
7. Relaxation (Shavasana & Makrasana)

TEXT & REFERENCES:

- Authors Guide (2015), International Day of Yoga, Common Yoga Protocol, New Delhi: Ministry of AYUSH, Government of India.
- George Feuerstein. (1975). Text Book of Yoga. London: MotilalBansaridass Publishers (P) Ltd.,
- Gore.(1990). Anatomy and Physiology of Yogic Practices.Lonavala: KanchanPrkashan.
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Semester II
PART – A: THEORY COURSES
PE-204
Course Title: SPORTS TECHNOLOGY

COURSE OBJECTIVES:

- Define the relationship between sports and engineering.
- To apprise different materials used in sports.
- To explain concept related to sports dynamics and facility management.
- Describe the importance of ethics within both sports and manufacturing.
- Identify technologies and sustainable solutions to manufacturing apparel.
- Assess and understand the manufacturing techniques within two companies.
- Relate the non-engineering sports world to the knowledge and technologies that engineering has developed.

STUDENT LEARNING OUTCOMES:

- Apply the concept of engineering and technology in sports.
- Differentiate different materials used in sports.
- Demonstrate and prepare programmes related to sports dynamics and facility management.

UNIT I: Introduction to sports engineering and technology

- Meaning of sports engineering,
- Human motion detection and recording, human performance, assessment,
- Equipment and facility designing and sports related instrumentation and
- Measurement
- Materials of Protection – discussion of the materials that are used for sports gear and protection
- Performance of Surface Materials – discussion of the different surfaces that sports are played on and why; how can these materials make a difference from sport to sport.
- Shoe Materials – discuss the design necessities that go into shoe materials and manufacturing and how that differs from sport to sport
- Balls and Ballistics – discuss the difference of the equipment that is used for specific sports and basic aerodynamic principles
- Performance of Surface Materials – discussion of the different surfaces that sports are played on and why; how can these materials make a difference from sport to sport.

UNIT II: Sports Dynamics

- Concepts of internal force, axial force, shear force, bending movement, torsion, energy method to find displacement of structure, strain energy.
- Biomechanics of daily and common activities –Gait, Posture, and Body levers, ergonomics,
- Mechanical principles in movements such as lifting, walking, running, throwing, jumping, pulling, pushing etc., Motion coordinate system, Kinetics of particles Newton's laws of Motion, Work, Energy, Impulse and momentum

UNIT III: Building and Maintenance:

- **Sports Infrastructure:** Gymnasium, Pavilion, Swimming Pool, Indoor Stadium, Out-door

- Stadium, Play Park, Academic Block. Administrative Block, Research Block, Library, Sports Hostels, etc. Requirements: Air ventilation, Day light, Lighting arrangement, Galleries, Store rooms,
- Office, Toilet Blocks (M/F), Drinking Water, Sewage and Waste Water disposal system,
- Changing Rooms (M/F), Sound System (echo-free),
- Internal arrangement accords to need and nature of activity to be performed, Corridors and Gates for free movement of people, Emergency provisions of lighting, fire and exits, Eco-friendly outer surrounding. Maintenance staff, financial consideration

UNIT IV: Practical/Field Visit

- Visit to a stadia for understanding the process of construction & requirements there of
- Building process:- design phase (including brief documentation), construction phase
- Functional (occupational) life, Re-evaluation, refurbish, demolish.
- Maintenance policy, preventive maintenance, corrective maintenance. record and register
- Gymnasium, Pavilion, Swimming Pool, Indoor Stadium, Out-door designs, development & maintenance

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test, Project Work, Assignments, Presentations, Practical Work

TEXT & REFERENCE:

- Franz K. F. etc. Editor, Routledge Handbook of Sports Technology and Engineering (Routledge, 2013)
- Steve Hake, Editor, The Engineering of Sport (CRC Press, 1996)
- Franz K. F. et. al., Editor The Impact of Technology on Sports II (CRC Press, 2007)
- Helge N., Sports Aerodynamics (Springer Science & Business Media, 2009)
- Youlin Hong, Editor Routledge Handbook of Ergonomics in Sport and Exercise (Routledge, 2013)
- Jenkins M., Editor Materials in Sports Equipment, Volume I (Elsevier, 2003)
- Colin White, Projectile Dynamics in Sport: Principles and Applications
- Eric C. et al., Editor Sports Facility Operations Management (Routledge, 2010).
- Brasch, N. (2010). Sports and sporting equipment. South Yarra, Vic.: Macmillan Education Australia.
- Bruce, L., Hilvert, J., & Hilvert-Bruce, A. (2005). Sports technology. South Yarra, Vic.: Macmillan Library.
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Semester I
PART – A: THEORY COURSES
PE-201
Course Title: SPORTS MANAGEMENT

COURSE OBJECTIVES:

- To describe organization and administration of sports programmes.
- To analyze and interpret sports philosophy, sports sociology, business systems, sports management, public administration and marketing techniques.
- To develop opportunities to construct & design the curriculum of PE in broader aspects realizing the age group, gender consideration and physiological basis

STUDENT LEARNING OUTCOMES:

- Identify issues relevant to modern physical education and sport management.
Explore the area as a career perspective

Unit I:

- Management: Concept and Principles of Management.
- Sports Management: Definition, Importance.
- Basic Principles and Procedures of Sports Management
- Functions of Sports Management
- Personal Management:
- Objectives of Personal Management, Personal Policies

Unit II:

- Management of infrastructure, equipment, finance and personnel.
- Programme Management:
- Factors influencing programme development.
- Organisation and Functions of Sports bodies.
- Competitive Sports Programmes, Benefits.
- Management Guidelines for School, College Sports Programmes,
- Management Problems in instruction programme,
- Community Based Physical Education and Sports programme.

Unit III:

- Purchase and Care of Supplies of Equipment:
- Guidelines for selection of equipment and Supplies,
- Purchase of equipment and supplies,
- Equipment Room. Equipment and supply Manager.
- Guidelines for checking, storing, issuing, care and maintenance of supplies and equipment.
- Public Relations in Sports:
- Planning the Public Relation Programme –
- Principles of Public Relation - Public Relations in School and Communities –

- Public Relation and the Media. Professional Ethics.

Unit – IV: (Practical)

- SWOT Analysis
- Organising sports meet:
 - Institutional sport event
 - Community sport event
 - Fitness Events for children
- Officiating in the institutional tournaments
- Planning & Organising sport event
- Report preparation of sport event
- Audit Management of sport event

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test, Project Work, Assignments, Presentations, Practical Work

TEXT & REFERENCES:

- Chakraborty & Samiran. (1998). Sports Management. New Delhi: Sports Publication.
- Charles, A, Bucher & March, L. Krotee. (1993). Management of Physical Education and Sports. St. Louis: Mosby Publishing Company.
- Chelladurai, P. (1999). Human Resources Management in Sports and Recreation. Human Kinetics.
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Semester II
PART – B
PE-206
SPORTS PRACTICUM COURSES II

PE- 206 (TRACK AND FIELD /(B) GYMNASTIC /(C) SWIMMING /(D) COMBATIVE SPORT: BOXING/ JUDO/ TAEKWONDO/ MARTIAL ART & KARATE/ WRESTLING (E) INDIGENOUS SPORT: MALKHAMB/ KABADDI/ KHO-KHO (F) TEAM GAME: BASEBALL/ BASKETBALL/ CRICKET/ FOOTBALL/ HANDBALL/ HOCKEY/ NETBALL/ SOFTBALL/ VOLLEYBALL (G): RACKET GAME: BADMINTON/ TABLE TENNIS/ TENNIS/ SQUASH

ESSENCE OF THE COURSE

The course of Sports –II is designed to provide an opportunity to teacher educators to learn the basic techniques of the game/sport and are not only able to display them but also systematically teach them.

COURSE OBJECTIVES:

1. To define and acquaint training preparation of Game/Sport
2. To employ the rules and regulation of Game/Sport
3. To emphasis on preparation for the Game/Sport.
4. To acquaint the student with progressive teaching stages of fundamentals skills of Game/Sport.
5. To orient & employ the rules and regulation in organization of competition in Game/Sport.

STUDENT LEARNING OUTCOMES:

1. After Completion of the course the students shall be able to:
2. Gain knowledge of the Game/Sport.
3. Learn the layout and marking for the Game/Sport.
4. Demonstrate various drills & lead up activities related to Game/Sport.
5. Develop the skills to teach rules, fundamentals and strategies of Game/Sport.

COURSE CONTENTS:

(General guidelines for development of required course contents in particular game/sport are given below)

Note: The course contents to be followed for the purpose of developing practical knowledge regarding marking, rules & regulation, officiating, technical training, tactical training, psychological preparation & preparation of training schedules)

UNIT – 1: Introduction

- Layout and marking of play field/ground/courts and measurement of equipments used in Game/Sport.

UNIT – II: Techniques/Skills development:

- Classification of techniques/skills.
- Technique/skill training: Preparatory, Basic, Supplementary exercises.
- Identification & Correction of faults.
- Training for mastery in technique/skill.
- Recreational and lead-up activities.
- Warm-up and cool down for game/sports.

UNIT –III: Officiating:

- Mechanics of officiating.
- Qualities of good official.
- Duties of official (pre, during and post game)
- Rules & their interpretations.

UNIT – IV: Training (Means & Method)

- Training methods and means for the development of motor abilities (Strength, Speed, Endurance and Flexibility)
- Basic Concept of preparation of training schedules.
- Tactical training in game/sport.
- Psychological preparation required during competition in game/sport.
- Preparation of short term and long term training plans in game/sport.
- Periodization in training of players in game/sport.
- General/specific fitness tests and performance/skill test in game/sport.

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test, Performance Test, Project Work, Assignments, Presentations, Practical Work

SUGGESTED READINGS

Latest Official Rule Books of International Federations of particular game/sport and Coaching manuals will be utilized.

Semester III
PART – A: THEORY COURSES
PE-301

Course Title: HEALTH EDUCATION AND SPORTS NUTRITION

THE COURSE OBJECTIVE IS

- To appraise the concept of holistic health through fitness and wellness
- To explain the students about the concept of physical fitness, health related and motor fitness
- To describe the contemporary health issues.
- To apply practical principles of the fitness & wellness

COURSE LEARNING OUTCOMES:

- Understand the concept of holistic health through fitness and wellness
- Explain the concept of physical fitness, health related and motor fitness
- Evaluate primary health status
- Prepare fitness schedules & evaluate fitness

UNIT I: Health Education

- Definition of Health, Health Education, Health Instruction, Health Supervision
- Aim, objective and Principles of Health Education
- Health Service and guidance instruction in personal hygiene
- Level of Health Care – Primary, Secondary, Tertiary
- Concept of Well Being and its components

UNIT II: Hygiene, Sanitation, Communicable and non-communicable disease

- Meaning and Types of Hygiene and Sanitation
- Care of Skin, Nails, Clothing, Bathing, Eyes, Mouth and Teeth.
- Rural and Urban Health problem
- Environmental sanitation, Personal and Environmental Hygiene for schools
- Communicable (Tuberculosis, AIDS, Rabies, Cholera) and Non Communicable Diseases (Cardiovascular Diseases, Cancer, Diabetes)

UNIT III: Schools Health Services

- Meaning & Objective of School Health Service
- Health Problem of School Child
- Role of health education in schools
- Health Services - Health record, Healthful school environment, first- aid and emergency care
- Mid-day School Programme

UNIT IV: Food, Nutrition and Health Problem:

- Meaning of Food & Nutrition.
- Sources and functions of various nutrients.
- Balance diet.
- Obesity, Malnutrition, Adulteration in food

LIST OF PRACTICUM

- Visit to factory and note down the occupational hazards/accidents that occur due to working conditions and prevention.
- Visit to Milk dairy and prepare a report based on the observation of the process of preparing milk.
- Visit to Institute Mess and/or Hotel and suggest steps to improve the hygiene there.

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Volunteering/Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test, Project Work, Assignments, Presentations

TEXT & REFERENCES:

- David K. Miller & T. Earl Allen, Fitness, A life time commitment, Surjeet Publication Delhi 1989.
- Dificore Judy, the complete guide to the postnatal fitness, A & C Black Publishers Ltd. 35 Bedford row, London 1998
- Dr. A.K. Uppal, Physical Fitness, Friends Publications (India), 1992. Warner W.K. Oeger&
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- Elizabeth & Ken day, Sports fitness for women, B.T. Batsford Ltd, London, 1986.
- Emily R. Foster, KarynHartiger& Katherine A. Smith, Fitness Fun, Human Kinetics Publishers 2002.
- Lawrence, Debbie, Exercise to Music. A & C Black Publishers Ltd. 37, Sohe Square, London 1999
- Robert Malt. 90 day fitness plan, D.K. publishing, Inc. 95, Madison Avenue, New York
- Benardot, D. (2012). Advanced sports nutrition. Champaign, IL: Human Kinetics.ISBN 9781450401616
- Burke, L. (2007). Practical sports nutrition. Champaign, IL: Human Kinetics ISBN. 9780736046954
- Connolly, M. (2012). Skills-based health education. Sudbury, MA: Jones & Bartlett Learning. ISBN 9781449630201
- Koelen, M., & Ban, A. (2004). Health education and health promotion. Wageningen, Netherlands: Wageningen Academic Publishers. ISBN 9789076998442
- Gilbert, G., Sawyer, R., & McNeill, B. (2011). Health education. Sudbury, Mass.: Jones and Bartlett Publishers. ISBN 9780763759292

Semester III
PART – A: THEORY COURSES
PE-302
Course Title: SPORTS PSYCHOLOGY

COURSE OBJECTIVES:

- To impart the concepts of psychology applied in the field of physical education and sports for optimal performance
- To introduce the field of sports psychology as a scientific discipline
- To develop understanding about various concepts of goal setting, motor learning and personality with respect to sports and athlete performance
- To review the motivational strategies applicable in the field of sports
- To analyze the influence of group and team on behavior of athletes influencing team cohesion and social behavior

STUDENT LEARNING OUTCOMES:

- Correlate the psychological concepts with the sports and athlete specific situations
- Integrate the knowledge about personality, motor learning for behavior modification of athletes
- Relate different theories of motor learning with its influence on motor perception and related cognitive abilities of athletes.
- List down the strategies for motivation utilized in the field of sports.
- Analyze the issues related to social behavior based on physiological structure and function

UNIT I: Introduction to Sports Psychology

- Meaning, definition of sports psychology,
- History of sports psychology in India and Abroad
- Interdisciplinary approach of Sports Psychology with other Sports Sciences
- Importance of Sport and Exercise Psychology for Physical Education Teachers, Athletes and Coaches
- Role of sports psychologist

UNIT II: Personality & Motivation

- Personality: Meaning and definition,
- Theories of personality (Psychoanalytic theory, Trait theory)
- Personality difference among sports person and its influence on performance
- Motivation: concept and definition
- Types of Motivation: Intrinsic, Extrinsic.
- Theories of motivation (need theory, Wiener attribution theories), Achievement Motivation in sports:
- Developing motivation and self confidence, goal setting and motivation
- Techniques of Motivation for developing sports performance and exercise adherence.

UNIT III: Emotion & Athletic Performance

- Meaning and Definition

- Anxiety: Meaning and Definition, Nature, Causes, Method of Measuring Anxiety. Competitive Anxiety and Sports Performance.
- Stress: Meaning and Definition, Causes. Stress and Sports Performance.
- Aggression: Meaning and Definition, Method of Measurement. Aggression and Sports Performance.
- Relationship of Emotion and Performance.

UNIT IV: Cognitive Process, Motor Development & Group Cohesion

- Meaning of Sensation, Perception, Memory, Information processing, Decision Making.
- Attention Processes and Concentration
- Intelligence and Intellectual Capabilities in Sports.
- Role of Cognitive process for Motor Skills acquisition, Motor control & neuromuscular process of athletes
- Definition of Group and Group Cohesion, Structure of Group & Team Dynamics

LIST OF PRACTICUM

- Assessment of State and Trait Anxiety of athletes
- Assessment of Sport and Exercise Motivation
- Assessment of Personality traits among athletes
- Assessment of Group Cohesion among team and individual sports.
- Assessment of Emotion

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture//Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test/ Project Work/ Assignments/ Presentations/ Practical Work/Teaching lesson plan

TEXT & REFERENCES:

- Authors Guide (2013) National Library of Educational and Psychological Test (NLEPT) Catalogue of Tests, New Delhi: National Council of Educational Research and Training Publication.
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Semester III
PART – A: THEORY COURSES
PE-303

Course Title: ICT & EDUCATION TECHNOLOGY IN PHYSICAL EDUCATION

COURSE OBJECTIVES:

- To impart the concepts of ICT & Education Technology in Physical Education and sports.
- To develop understanding about various concepts of computer fundamentals and applying technology in teaching learning situation.

STUDENT LEARNING OUTCOMES:

- Correlate the of ICT & Education Technology in Physical Education and Sports concepts with the sports and athlete specific situations
- Integrate the knowledge about Communication Process and Teaching for learner.
- List down the Information Technology utilized in the field of sports.
- Analyze the issues related to Internet, Networking, E-learning and Cyber Security.

UNIT I: Basics of Education Technology

- Concept of Education Technology
- Role of Educational Practices
- Hardware Technologies
- Overhead Projector
- Still and Movie Projector
- Audio Visual Recording Instruments
- Television and Computers

UNIT II: Communication Process and Teaching

- Communication: Concept and process of Communication, Principles of Communication, Barriers of Communication, Class room communication (Verbal and Non-Verbal)
- Team Teaching: Meaning, Objective, Types, Principles, Procedure, Advantages and Disadvantages
- Modification of Teacher Behavior: Flanders's interaction analysis, concept, Procedure, advantages and limitations.

UNIT III: Information Technology

- Meaning, Nature and significance of information technology in teaching learning process.
- Multimedia Approach to Education: Role of Video conferencing, radio conferencing, television, Internet in teaching learning process, their advantage and limitation.
- Role and Composition of Central institute of Education and Technology, National Open School, State Educational Technology Cells, Distance Educational Institutions and their role for the improvement of teaching learning.

UNIT IV: Introduction of Computer, Internet, Networking, E-learning and Cyber Security

- MS Office, Data management System using Excel and Power point presentation.
- Advantage and type of Networking, Different Protocols, Type of Internet Connectivity and World

Wide Web (WWW)

- E-learning – Definition, Advantage and Characteristics, Role of E-learning
- Introduction of Cyber Security: Security Services, Types of Attacks, Cyber crime, Online Fraud and Identity Theft, Desktop Security and Email & Web Security

LIST OF PRACTICUM

- Design various types of formats in MS Excel
- Preparation of PPT
- Searching & Browsing
- E-referencing System
- Video conferencing

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture/Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test, Project Work, Assignments, Presentations, Practical Work

TEXT & REFERENCES:

- Goldin, C., & Katz, L. (2008). The race between education and technology. Cambridge, Mass.: Belknap Press of Harvard University Press. ISBN-13: 978-0674035300. ISBN-10: 0674035305
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- Leight, J. Technology for physical education teacher education. ISBN-10: 1494895765 ISBN-13: 978-1494895761
- Felker, K. (2011). Integrating technology into physical education and health. [Place of publication not identified]: American Press. ISBN-10: 0896414965. ISBN-13: 978-0896414969
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Semester III
PART – A: THEORY COURSES
PE-304
Course Title: SPORTS MEDICINE

UNIT I: Introduction

- Concept of Sports Medicine, Its aim and objectives, Need and Scope of Sports Medicine in Physical Education.
- Role of Sports Physician, Physical Educator/ Athletic Trainer, the coach and the player in sports medicine.
- Brief historical sketch of sports medicine in India.

UNIT II: Sports Medicine Problems

- Low back problems and management: Stretching and strengthening exercise for back problems
- Mal - Nutrition and management.
- Sex Problems in athletes, differences between the two sexes.
- Advantages and disadvantage or exercises, before, during and after pregnancy.
- Common old age problems and evaluation of male and female athletes
- Sports medical problems of athletes and rehabilitation.

UNIT III: Doping in Sports

- Dope History, definition
- Classification of Doping
- Signs and symptoms of Doping
- Procedure and sampling at National and Inter National levels.
- Use and abuses of drugs.
- Role of WADA and NADA

UNIT IV: Food supplements for Sportsmen

- Protein and creatine utilization
- Planning and justification of athletic diets for different categories of sports
- Advisory Bodies
- Role of Water for Indian Athletes.

TEACHING LEARNING STRATEGIES: The class will be taught by using lectures and demonstration, seminars, classroom discussion, videos, charts and presentations method.

ACTIVITIES: Lecture/Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc.

ASSESSMENT RUBRIC: Classroom Test/ Project Work/Assignments/ Presentations, Practical Work/ Teaching Lesson Plan