

PROPOSAL FOR D. Phil Course Work

Physical Education is a broad field of study. Its interdisciplinary approach is related to science, humanities and art. There are numerous established areas and sub-disciplines to focus through research studies in Physical Education are hereby considered as specialized areas at present.

D. Phil Rules and Regulations for Course Work

(Course Work: Credit Requirements, number, duration, syllabus, minimum standards for completion, etc.)

Minimum Credit, number, duration, syllabus, minimum standards for completion required for D. Phil programme shall be as follows:

1. Credits: 08 Credits

- **Core Course:** Research Methodology, Statistics Computer Application in Physical Education-04 Credits
- **Elective Course:** Elect any one course related to specific research area out of 13 course paper-04 Credits

Core course provides an in-depth knowledge of Research process and acquainting the student with different methods of Research in Physical Education and sports sciences. Core course is the compulsory course in which he/she is enrolled for D. Phil. program.

Elective course is meant for enhancing the research scholar's knowledge and understanding the detail about the specialized area he/she is interested in his/her research study. D. Phil scholar can select one course from 14 elective courses from the current trends and relevant areas in the field of physical education and sports sciences according to their D. Phil. Topic.

2. **Duration:** The minimum duration of course work for D. Phil programme shall be of one semester.

3. **Evaluation/ Assessment:** The assessment of 100 Marks for each course (Core & Elective courses) based on:

- Written Exam: 60 Marks
- Assignment/ Practical: 20 Marks
- Seminar presentation: 20 Marks

The evaluation worth 60 marks of written exam and rest 40 marks will be done on the basis of assignments/ Practical and seminar presentation.

A D.Phil. scholar has to obtain a minimum of 55% of marks or its equivalent grade as per UGC Regulations.

Written Exam: At the end of the course (Core & Elective courses) the research scholar will be given a written examination worth 60 marks. Written Exam shall contain five descriptive type questions with internal choice from entire syllabus. Each question shall carry equal marks. The duration of the written examination shall be three hours.

Seminar Presentation: The research scholar has to give presentation which shall be from the area related to their topic of research. The presentation shall be of twenty minutes duration followed by ten minutes question and answer session. The presentation shall be evaluated by the supervisor/ course instructor and the award assigned to the candidate will have to be submitted in the department.

Assignment/ Practical: Each supervisor/ course instructor shall give assignment or practical work to the research scholar. He shall evaluate the assignment or practical work and provide the award list along with the assignment submitted by the research scholar to the Department of Physical Education.

Core Course

(Compulsory Paper)

PHE: 801

Research Methodology, Statistics and Computer Application in Physical Education

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

Objective: Research Methodology which could cover areas such as quantitative methods, computer applications, research ethics and review of published research in the relevant field, training, field work, etc.

This course is designed to familiarize students with some of the frequently used qualitative & quantitative methods, software in physical education and sport sciences research.

At the end of the course the students will be given a written examination, assignments/ practical, seminar presentation.

Course content:

UNIT I: Re-orientation: Concept, types of Research & Statistics

Research Methods: Design, Data, Tool

- Descriptive-Survey, Tools of Surveys: Questionnaire, Interview, Case study etc
- Experimental-Experimental & Control group, Experimental designs
- Philosophical- Methodology and tools
- Historical- Sources of Data, Historical Criticism

UNIT –II: Review of Related Research & Ethical Issues

Resource and types of Reviews: Critical & Allied

- Searching
- Network: DELNET; INFLIBNET; E-journal/E-books
- Indexing: Citations index, Index Journal, Referred Journal, IP, IF

Evaluation of Review of any Research Work related to topic

Research Ethics

UNIT –III: Data Analysis & Interpretation

Review of Research Data: Quantitative & Qualitative, Descriptive & Inferential, Hypotheses testing etc

Interpretation data and drawing Conclusions

UNIT –IV: Computer Application

Computer -An overview, Use of MS Office -Word, Excel, Power Point; Internet, SPSS & other related Software

UNIT –V: Research Report Writing / Completion Research process

Review of different forms of publication – Research Proposal, Conference paper, paper for journal, Research report

Organization of Research Report: Preliminaries, Main Part, Reference materials

Writing styles (APA), format and technical standards

Research Abstract

UNIT–VI: Course Related Practical Work (Computer, Searching Review, Research Writing etc)

Suggested Readings:

- Barrow, H. M. (1979). *Practical Approach to Measurement in Health & Physical Education*. (3rd ed.). Philadelphia: Lee & Febigeer
- Best, J. W. & Kahn, J. V. (2006). *Research in Education*. (10th ed.). New Delhi: PHI
- Clark, D. H. & Clark, H. H. (1979). *Research process in Physical Education, recreation & health*. Englewood Cliffs: prentice Hall.
- Johnson, B. & Christensen, L. (2008). *Education Research, Quantitative, Qualitative and Mixed Approaches*. (3rd ed.). Sage Publication: England.
- Miller, David. K. (2002). *Measurement by the Physical Educator*. New York: McGraw Hill companies.
- John & Nelson (1998). *Practical Measurements for Evaluation in Physical Education*. Delhi: Surjit Pub.
- Sprinthall, R. C. (1997). *Basic statistical Analysis*. (5th ed.). USA: Allyn & Bacon
- Thomas, J. R. & Nelson, J. K. (2001). *Research Methods in Physical Education*, (4th ed.). USA: uman Kinetics.
- Vincent, W. J. *Statistics in Kinesiology*. Campaign: Human Kinetics
- 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*, ND.
- 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, N Delhi

Note: Other References of the Books & Study material will be provided in class by the course instructor (s).

Elective Course: Subject Specific Course (Select any one)

Maximum Marks: 100

Credit Points: 04

Objective: All the students for D. Phil. Programme in Department of Physical Education will have to take a minimum of one paper *from* the Elective Courses which shall be the requirement for completion of Course Work.

Programme Structure: A total of 14 papers have been tabulated below. The detailed syllabus for the offered papers in the Elective Course is appended with a list of suggested readings.

S.N.	Elective Course Code	Elective Course Title
1.	PHE:851	Health Related Fitness Assessment in Youth
2.	PHE:852	Physiology of Aging
3.	PHE:853	Test and Measurement in Physical Education
4.	PHE:854	Sports Specific Fitness Testing
5.	PHE:855	Physical Activity & Positive Psychology
6.	PHE:856	Psychological Interventions in Sports
7.	PHE:857	Theory, Methodology of Training & Assessment
8.	PHE:858	Physiology of Yogic Practices
9.	PHE:859	Athletic Intelligence (to be revised)
10.	PHE:860	Society, Stratification and Sports
11.	PHE:861	Management Practices in Sports
12.	PHE:862	Biomechanics of Exercise, Fitness, Physical Education & Sports
13.	PHE:863	Physiology of Exercise
14.	PHE:864	Fitness And Wellness in Women Undergoing Transitionary Changes/Midlife Crisis

Evaluation: The evaluation worth 60 marks of written exam and rest 40 marks will be done on the basis of assignments/ Practical and seminar presentation.

Subject Specific Course Work
Elective Course: PHE: 851

HEALTH RELATED FITNESS ASSESMENT IN YOUTH

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

UNIT-I

- Health Related Fitness: Overview, Association Between Physical Activity And Health,
- Lifestyle As A Health Problem, Health Benefit
- Health Related Fitness Testing: Purpose Of Fitness Testing, Scientific Authenticity Of Test Selection, Pre Testing, Testing, Post Testing Session, Inform Consent

UNIT-II

- Measuring Health Related Component; Motor Fitness Related Component: Significance of Assessing Cardio Respiratory Fitness, Flexibility, Muscular Strength And Endurance And Body Composition, Various Field Test And Lab Test To Measure Health Related Fitness Component
- Body Composition Assessment: Technique To Assess Body Composition, Importance of Regular Body Composition Assessment

UNIT-III

- Obesity: Etiology Of Obesity, Risk Associated With Obesity And Prevention
- Cardio Vascular Disease And Physical Activity: Forms Of Cardiovascular Disease, Risk
- Factors For CVD, Prevention Through Physical Activity

UNIT-IV

- Fitness And Health Assessment: Factors Affecting Fitness Assessment, Variability And
- Reliability Of Testing, Test Administration
- Guideline For Fitness Testing: Medical Clearance, Par-Q, Criteria For Selecting Cardio
- respiratory Fitness Test And Stop Test Indicator

UNIT-V

- Maximising Cardio Respiratory Fitness: The Fitt Prescription, Life Time Exercise Activities, Calculating Exercise Activities.
- Developing Musculoskeleton Fitness: Factor Affecting Flexibility, Types Of Flexibility,
- Guideline And Principle Of Flexibility Development

REFERENCES

- Camaione David N. (1993), Fitness Managemrnt, Brown And Benchmark Communication, Inc.
- Hoeger Werner W.K, Principles And Labs For Fitness And Wellness, Thomson Wadsworth Publication
- Wilmore Jack H.(1994), Physiology Of Sports And Exercise, Human Kinetics

Subject Specific Course Work
Elective Course: PHE: 852

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

PHYSIOLOGY OF AGING

UNIT-I

- Physical activity, health and aging: Concept of aging, physical activity in the population, health status in the elderly and health related quality of life in the population.
- Changes associated with aging: Physiological, physical and psychological changes, gender differences.

UNIT-II

- Fitness assessment guidelines in the elderly population: guidelines for fitness testing, factors affecting performance on fitness tests and fitness testing protocols.
- Physical fitness screening and testing concepts: medical screening, health status questionnaire, cardiovascular disease risk factor analysis, contraindications for exercise and exercise testing, informed consent.

UNIT-III

- Physical Activity health and longevity: causes of deaths in the elderly population, exercise, health and longevity, benefits of regular moderate exercise.
- Physical training by the elderly: Vo₂ max and the aging process, cardio respiratory training, muscular strength and resistance training and body compositions changes.

UNIT-IV

- Fitness testing in the elderly population: importance of functional fitness tests, contraindications for fitness testing, administering the PAR-Q, prior to exercise testing.
- Administration of fitness test: Exploring field and lab test or assessing fitness test in the elderly population, fitness/functional fitness testing batteries.

UNIT-V

- Physical activity and Psychological well being: Benefits of exercise on mental health and other psychological parameters, questionnaire review or psychological well being in the elderly population.
- Age related health disorders: Cardiovascular disease, osteoporosis.

Suggested Readings:

- Williams D. et.al., "Exercise Physiology: Nutrition, energy and human performance (7th ed), Williams & wilkins, 2010.
- David C.Nieman, "fitness and sports medicine a health related approach (third edition), Mayfield Pub,1998.
- Jack H.Wilmore and DavidL.costil, "Physiology of sports and exercise" (third edition), Human Kinetic Pub, 2004.
- Scott K.Powers and Edwad T.Howley, Exercise Physiology: Theory and application to fitness and performance (seventh edition), Human Kinetic, 2000.
- Stanly P.Brown et.al., "Exercise Physiology: Basis of human movement in health and disease", Human kinetics, 2006.

Subject Specific Course Work
Elective Course: PHE: 853

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

TEST & MEASUREMENT IN PHYSICAL EDUCATION

Unit-I

- Meaning, Definition & Relationship Among Test, Measurement & Evaluation
- Basic Functions of Test, Measurement & Evaluation
- Importance of Test, Measurement & Evaluation in the Field of Physical Education & Sports
- Common Methods of Measurement
- Everyday Usage of Test, Measurement & Evaluation

Unit-II

- Meaning & Definition of Tests
- Importance of Tests
- Classification of Tests
- Tools in Measurement & Evaluation in Physical Education
- Sports Psychological & Skill Testing- General Sports Skill Tests

Unit-III

- Criterion of a Good Test
- Meaning , Definition & Comparative Importance of Different Types of :
- Validity
- Reliability
- Objectivity
- Precision
- Administrative Feasibility

Unit-IV

- Meaning, Definition & Relative Importance of Different Types of Norms & Standards
- Development of Different Types of Norms, Scales, Standards of Physical Education
- Construction of Sports Skill Tests
- Steps for Construction of Sports Skill Tests
- General Type of Sports Skill Tests
- Utility of Sports Skill Tests
- General Sports Skill Measurement with Lab & Field Tests
- Skills Evaluation and Rating Scales: Subjective and Objective Evaluation, Construction of Rating Scale of Evaluation; General Procedures for Skill Achievement Evaluation (Pilot Study, Revision of Evaluation Battery and Validity of Evaluation Batteries).

Unit-V

- Evaluation & Levels of Measurement: Nominal, Ordinal, Interval & Ratio Scale Evaluation
- Introduction, Meaning, Definitions and Types of Grades.
- Grading Systems & Factors used in Grading (Affective, Grading & Psychomotor Grading Factors); Weight age of Factors in Grading.

Suggested Readings:

- Barrow, H.M. R. McGee and K. A. Tritschler (1989), Practical Measurement in Physical Education and Sports, Lea & Febiger, Philadelphia, USA.
- Baumgartner, T.A. and A.S. Jackson (1995), Measurement for Evaluation in Physical Education & Exercise Science, WCB-Brown & Enchmark Publication, Madison, Wisconsin, USA.
- Chopra, D. (1993), Ageless Body, Timeless Mind: A practical alternative to GROWING Old, Crown Publishers Inc. New York, USA (Indian Print by Runa & Co. & Gopsos Papers Ltd., Noida, U.P.)
- Kansal, D.K. (2006), Test, Measurement & Evaluation in Physical Educational Sports , Sports and Spiritual Science Publications, New Delhi.
- Miller, D.K. (2006), Measurement by the Physical Education: Why and How, WCB, Brown & Benchmark Publishers, Madison, Wisconsin, USA.
- Shaw, Dhananjay, Fundamental Statistics in Physical Education and Sports (1998, 2000, 2006) Sports Publication, New Delhi.

Subject Specific Course Work
Elective Course: PHE: 854

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

SPORTS SPECIFIC FITNESS TESTING

UNIT -I

- Physical and physiological prerequisite of specific sport/ players: Physical attributes related to playing position, physiological attributes based on playing position
- Guidelines for fitness testing of players of specific sport: Overview guidelines for fitness testing, importance of health screening, factors influencing physical fitness test performance.

UNIT -II

- Fitness testing in specific sport: Fitness testing batteries, field and lab based tests, contraindication of fitness testing.
- Physiological assessment of players of specific sport: Monitoring blood pressure, heart rate, lung volume and capacities and VO₂ during exercise and rest, assessment based on level of performance of the specific sport.

UNIT-III

- Assessment of body composition of players of specific sport: Methods of assessing body composition generalized body composition equations, assessment based on specific playing position of the players, anthropometric assessments.
- Assessment of performance related fitness of players of specific sport: Explosive strength, cardio respiratory endurance (VO₂ max), anaerobic power, strength and flexibility. Assessing soccer players of different levels.

UNIT -IV

- Specific sports fitness test: Overview, specific fitness test batteries.
- Administration of specific sports fitness test.

UNIT -V

- Review on studies focusing on validating and establishing reliability of specific sports fitness test.
- Procedure followed to establish validity and reliability of specific sports fitness test.

Suggested Readings:

Note: References of the Books & Study material will be provided in class by the course instructor (s).

Subject Specific Course Work
Elective Course: PHE: 855

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

PHYSICAL ACTIVITIES & HEALTH PSYCHOLOGY

Unit-I

- Health & Positive psychology perspective.
- A new perspective for professional practice.
- Fostering healthy self regulation from within and without, a self determination theory perspective.
- Theoretical foundation for positive psychology in practice.

Unit-II

- Life style practices for health & well being.
- Physical activity: Positive psychology in motion.
- Achieving sustainable new happiness: prospects practices & prescriptions.

Unit-III

- Health psychology: A positive psychological perspective.
- Health psychology: An overview.
- Emotion and health.
- Primary prevention: Decreasing the risks of illness.

Unit-IV

- Psychology and health.
- Clinical application of wellbeing therapy.
- Stress: Its causes, effects & control.
- Personal characteristics & Health.
- Hestility, Perfectionism & socioeconomic status.
- Promoting healthy lifestyle.

Unit-V

- Personality & Health
- The psychoanalytic approach.
- Social Cognition theory.
- Roger's self theory.
- The big five factors.
- Personal & health: types & behavior pattern.
- Personality & behavior in work settings.

Suggested Readings:

- > Positive Therapy- A positive psychological theory of therapeutic practice.
- > K.D.Broota et.al, (ed.) Introduction to psychology Part I (NCERT).
- > Robert A.Baron, Denn Byrne, Nyla R.Branscombe., Social Psychology 11th edition (Prentice hall).
- > Robert A.Baron., Psychology 5th edition (prentice hall, 2002).
- > Stephen Wovchel 2nd edition Psychology.: Principles & Applications.
- > P.Alex Linley & Stephen Joseph.(ed.) Positive psychology in practice.

Subject Specific Course Work
Elective Course: PHE: 856

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

PSYCHOLOGICAL INTERVENTION IN SPORTS

Unit-I: Introduction to Psychological Skills Training:

- What are psychological skills training?
- Importance of psychological skills training and its effectiveness
- Designing and implementation of PST program
- Attention, Measurement, Attention control
- What is Motivation, Self theory of motivation, sport motivation
- Cohesion, Goal Setting

Unit-II Arousal Regulation

- Self-awareness of arousal
- Anxiety reduction techniques
- Coping with adversity
- On-site relaxation tips
- Arousal-inducing techniques
- Team energizing strategies

Unit-III Imagery

- What is Imagery?
- Factors affecting the effectiveness of imagery
- How imagery works
- Keys to effective imagery
- Developing an imagery training program

Unit-IV Self-Confidence

- Defining self –confidence
- How expectations influence performance
- Self-efficacy theory
- Assessing Self-confidence
- Building self-confidence
- Sport self-confidence

Unit-V Coping

- Meaning and concept of coping
- Emotional focus coping
- Problem focus coping
- Individual difference & coping strategy

Suggested Readings:

- Arnold Leunes, Jack R .Nation .Sport Psychology 3rd ED.USA Vicki Knight
- Richard A Schmidt , Craig A-Wrisberg. Motor Learning and Performance 3rd ED. HumanKinetics
- Richard Cox. Sports Psychology. Human Kinetics
- Robert S.Weinberg, Daniel Gould. Foundations of Sport& Exercise Psychology 3rd ED.Human Kinetics

Subject Specific Course Work
Elective Course: PHE: 857

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

THEORY AND METHODOLOGY OF TRAINING AND ASSESSMENT

Unit-I

Sports training:

- Definition, meaning and importance.
- Methods of Training-continuous method, interval methods and repetition methods.

Training load, adaptation and recovery:

- Concept of training load, factors of load.
- Training & completion demands & degree of load.
- Process of load and adaptation.
- Relationship of load & recovery.
- Means to assess the load.
- Relationship between volume & intensity, dynamics of increasing the volume and intensity.
- Intensity zones for strength, speed, endurance and cyclic sports.
- Fatigue and symptoms of fatigue.
- Overload causes and symptoms of overload, tackling of overload.
- Recovery, factors affecting recovery, means and methods of recovery.

Unit-II

Load of physical activity in weight control:

- Changes in body composition with exercise training.
- Mechanism for change in body weight and composition.
- Exercise and mobilization of body fat.

Unit-III

Physiological adaptation to training programme:

- Cardiovascular, respiratory and metabolic physiological adaptation
- Factor affecting the responses to aerobic training
- Assessment of blood pressure, resting heart rate, vital capacity, peak flow rate, physiological responses and adaptation to intermittent and endurance training programme
- Effect of continuous aerobic training on the system, effect of intermittent aerobic training on the system.

Unit-IV

Assessment of body compositions:

- Concepts of body compositions.
- Methods of measuring body compositions, Body Mass Index, skin fold measurement, conicity index, waist hip ratio, generalize body composition equations.

Energy cost of activities:

- Direct and indirect estimation energy cost, resting energy expenditure, basal metabolic rate, and energy cost of level walking, uphill walking and other activities.
- Assessment of basal metabolic rate.

Unit-V

Assessment of cardio respiratory fitness:

- Concept of cardio respiratory fitness.
- Field and lab test to measure cardio-respiratory fitness in adults.

Assessment of psychological parameters:

- Concept of general well being and self esteem.
- Benefits of training on general well being and self esteem.
- Administration of general well being and self esteem.

Suggested Readings:

- Bompa, Thodor O. Theory and Methodology of Training. Champaign IL: Human Kinetics(2007).
- Singh Hardayal, Science of Sports Training.DVS Publications, New Delhi.
- Willmore Jack, H., Costill David L. Physiology of Sports and Exercise. Human Kinetics (2004),.
- Powers Scot K., Howley Edward T. Exercise Physiology: Theory and Application to Fitness and Performance 7th ed (2000).
- Plowman Sharon A., Smith Denise C. Exercise Physiology for Health Fitness and Performance 2nd ed. (2008).
- Ardle Willian D.Mc., Katch Frank I., Katch and Victor L. Exercise Physiology Nutrition, Energy and Human Performance.

Subject Specific Course Work
Elective Course: PHE: 858

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

PHYSIOLOGY OF YOGIC PRACTICES

Unit-I

Historical studies

- Definition, Importance of yoga.
- Dimensions of Yoga.

Unit-II

Asanas

- Define, Difference between asanas and exercise.
- Anatomic –physiology features of classification of asanas.

Unit-III

Pranayama

- Mechanism of Pranayama.
- Scientific aspect of Pranayama.

Unit-IV

Yoga for sports and wellness

- Yoga for different age groups.
- Yoga Asanas on sports preparation.

Unit-V

Yoga and health

- Perfect healthy frame of body and its characteristic. .
- Mitahara and concept of life.

Suggested Readings:

- J.C. Singhal “Yoga perceived and practiced by sages of India”,
- O.P. Tiwari. “Asana why and how”,
- Swami Kuvalayananda “Pranayama”,.
- The sivananda yoga centre “The book of Yoga the complete step-by –step guide”..
- Leslie Kamin off “Yoga anatomy”,.
- Kogler “Yoga for ever athlete”,.
- Dr. Manohar L .Gharote “Yogic Techniques”,.
- M.M. Gore “Anatomy and Physiology of Yogic Practices”.

Subject Specific Course Work

Elective Course: PHE: 860

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

SOCIETY, STRATIFICATION AND SPORTS

Unit-I -Introduction:

- Sociology and Sports Sociology
- Sociological thinkers : Emile Durkheim, Max Weber, Karl Marx
- Theories and sociological theories.
- Functionalism, conflict theory, interactionism

Unit-II –Social Stratification and Perspectives:

- Meaning and types of social stratification
- Social stratification and functional perspectives
- Social stratification and conflict perspective
- Social stratification and symbolic interactions perspective

Unit-III –Classes and Social Stratification:

- Class, Social groups and social categories
- Caste and class
- Social mobility and stratification
- Types of mobility-upward, downward, parallel

Unit-IV –Society and Individual:

- Society and individual (personality)
- Social context and type of personality
- Social context and motivation aspiration
- Social forces and individual

Unit-V –Social stratification and demography:

- Society and concept of society
- Ancient, feudal, model (caste and socialistic and) sports
- Demographical research (selection of subjects)
- Demography study & sports research
- Ethnology & Sports research.

Suggested Readings:

- Coakley, J. (1998). Sport in society: issues & controversies.
- McGraw-HILL INTERNATIONAL EDITIONS
- Durkheim, E.(1984). George, E. Durkheim and modern sociology. Great Britain: Cambridge university press, Simpson,
- Foly, D. (1990). Learning capitalist culture. Philadelphia: university of Pennsylvania press.
- McPherson, B.D. ; Curtis, J.E. and Loy, J.W.(1989). The social significance of sports: an introduction to the sociology of sports. Champaign: human kinetics books, USA
- Ogburn, W.F. & Nimkoff, M.F. (1964) A Handbook of sociology Routledge & Kegan Paul Ltd., LONDON.
- Hargreaves, J. (1986). Sport, power and culture – A social and historical analysis of popular sports in Britain, Cambridge : Polity press.
- Research methodologies and methods, "Research and Methods", IGNOU, school of social science Book-1, New Delhi. , 2005.
- Research methodologies and methods, "Quantitative and survey methods", IGNOU, school of social science Book-2 & 3 New Delhi. , 2005.

Subject Specific Course Work

Elective Course: PHE: 861

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

MANAGEMENT PRACTICES IN SPORTS

Unit-I:

Fundamental Concepts of Sports Management:

- Definition, evolution & curriculum
- Career considerations & avenues & professional preparation
- Research Theory & Practice
- Aims, Objectives & Principles of Sports Management
- Who are Sports Managers? Job Specifications, and environment.

Unit-II:

The World of Sports Management:

- International Perspective in Sports Management: Asia (China, Korea & India),
- Australia, Africa, America (Canada, USA), Europe (France, Hungary, Netherland, Germany, Spain)
- Management Approaches: Classical, Behavioural, Systems, Contingencies, Management Science.
- Management Styles: The Autocratic, The Bureaucratic, The Democratic & The Spectator Style.
- Management Information System (MIS).
- Media & Sports Management, Public Relations, Communications

Unit-III: Event Management:

- Basic Principles & Planning (Organizing, Directing & Evaluating)
- Facilities, Equipments, Personnel/Committee & Leadership, Creating & Maintaining
- Motivation.
- Promotion & Marketing (Budget Considerations & Risk Management).
- Applied Concepts: Evaluation & Feedback Protocol of Ceremonies, Websites,
- Marketing Process, Public Relations.
- Control & Security: Violent Behaviour, Crowd Management, Alcohol Policy,
- Medical Plan, Crisis Management & Evaluation Plan, Parking & Traffic Control.

Unit-IV: Facilities & Equipment Management:

- Sports Facilities Equipments & Ancillaries Areas
- Fitness & Health Relation Areas
- Aquatic & Indoor Facilities
- Outdoor & Adventure Sports
- Facilities for Senior, Impaired/Challenged and Special Population.

Unit-V: Fiscal Management & Applied Areas:

- Definition & Role of Accounting in Sports Management
- Fund Raising, Sponsorships, Economic Problems Areas.
- Budgeting: Preparation, Presentations, Revision etc.
- Office Management: Record, Reports, time management, conflict resolutions, decision taking shared planning Identifying weaknesses & strength.
- Preventing legal Issues & Hassels.

Suggested Readings:

- Aggarwala Vira. Bharna (1992). Management Principles, Practices, Techniques II Edition (Deep & Deep Publications – New Delhi).
- Chelladurai P. (1985). Sports Management Macr-Perspectives (Adelaide St., London Ontario).
- Davis, Kathleen. A. Sports Management: Successful Private Sector Business Strategies USA: WCB Inc.
- Goel, S.L., (1995). Modern Management Techniques (Deep & Deep Publications – New Delhi).
- Parkhouse, Bonnie (1991). The Management of Sports: Its Foundation and Application. St. Louis: Mosby-Year Book Inc.
- Plunkett, Richard. W. Supervision (1991) The Direction of People at Work. USA: Allyn and Bacon Inc.
- Sandhu, Kiran (1995) Sports Dynamic: Psychology, Sociology and Management. Galgotia publication: New Delhi
- Walker, Marcia, L. and Stortar, David K. (199). Sports Facility Management. London: Jones and Barlett Publishers

Subject Specific Course Work
Elective Course: PHE: 862

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

BIOMECHANICS OF EXERCISE, FITNESS, PHYSICAL EDUCATION AND SPORTS

Unit-I

Basics of Biomechanical Research

- Scope of Biomechanical research
- Understanding of Basic Mathematical theorem applied in

Biomechanical research- Steps of Mechanical Analysis

- Determination of objective
- Characteristics of the technique
- Study of top-flight performance of the technique
- Phases of the technique
- Division of phases into key elements
- Understanding of mechanical reasons each element is performed

Unit-II

Essential Mechanics and Movement Foundation

- Kinematics
- Kinetics

Unit-III

Types of Analysis

- Qualitative analysis- Application, Sample analysis
- Quantitative – Measurement issues, Laboratory data collection, Field data collection.

Unit-IV

Tools for Measuring Kinematics Variables

- Timing devices: Watches
- Velocity measuring devices: Radar guns, Laser Devices (Power Time Tester)
- Accelerometer
- Optical imaging system – Imaging measurement technique

Photo Instrumentation and Filming fundamental

- Methods of determination of CG in the Human Body
- Electro goniometry

Unit-V

Tools for Measuring Kinetics Variables

- Force platform
- Force transducers
- Pressure Sensors
- Electromyography

UNIT-V:

Biomechanical Basis of Fitness and Performance:

- Principles and Evaluation of Training
- Training of Strength, Speed Power, Endurance, Fatigue and Flexibility
- Exercise Devices.
- Different types of Exercise.
- Methods and Means of Exercises
- Biomechanical Measurements of Fitness and Performance

Structure and Qualities of Motor Actions:

- Structures and types of Motor Actions (Motor Movements)
- Design of Motor Action in relation to it's different parts/phase.
- Analysis of Motor Action using biomechanical Instruments.
- Different Qualities of Motor Actions
- Measurement of different Qualities of Motor Action using Biomechanical Instruments.

SUGGESTED STUDIES:

- Basmajian, J.V. (1962). *Muscles Alive: Their Functions Revealed by Electromyography*. Baltimore:Williams and Wilkins Co.
- Basmajian, J.V. (1971). *Electromyographic Analysis in J.M. Cooper (Ed.) Selected Topic on Biomechanics*, Chicago, Athletic Institute.
- Dempster, W.T. *Free Body Diagrams as an Approach to the Mechanics of Human Posture and Motion in*
- F.G. Evans (Ed.). *Biomechanical Study of the Musculoskeletal System*. Springfield. III: Charles C. Thomas Publisher, 1961.
- Dilman, C.J. *Muscular Torque Patterns of the Leg During the Recovery Phase of Sprint Running (Doctoral Dissertation. Pennsylvania State University 1970)*. Dissertation Abstract International, 1971,32, 222 A. (University Microfilms No.71-16.952).
- Grabner (1993), M.D. Ed. *Current Issue in biomechanics* Champaign, Human Kinetics Publishers, 1993.
- Harries, R.W. *Kinesiology Workbook and Laboratory Manual* Boston: Houghton Mifflin Company,1977.
- Hartze, H. Letter: The Meaning of the Term "Biomechanics." *Journal of Biomechanics*, 1974, 7, 189-190.
- Hartze, H. *Biomechanical Aspects of a Successful Motion optimization*. In P.V. Komi (Ed.),
- V.B. *Baltimore Biomechanics: University Park Press*, 1976 (a).
- Hawley, G. *The Kinesiology of Corrective Exercise*. Philadelphia: Lea & Febiger, 1937.
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- Hay J.G. *Biomechanics of Sports Technique 3rd Ed.*, New Jersey: Prentice Hall, 1985.
- Higgines, J.R. *Human Movement: An Integrated Approach*, St. Louis: C.V. Mosby Company, 1977.
- Hockmuth, G. and Others *Biomechanics of Athletic Movement*. Berlin: Sporturlag, 1984.
- Miller, D.I. *biomechanics of running – What should the Future Hold*. *Canadian Journal of Applied Sport Science*, 1978, 3, 229-236.
- Shaw, Dhananjoy (2000). *Mechanical Basis of Biomechanics*, New Delhi: Sports Publications
- Shaw, Dhananjoy, *Pedagogic Kinesiology*. Delhi: Sports Publication, 1998.
- Shaw, Dhananjoy, *Biomechanics and Kinsiology of human Motion*. Delhi: Khel Sahitaya Kendra, 1998.
- Shaw, Dhananjoy and Tomar, Rakesh *Doctoral Research in Physical Education and its Sciences in Development Countries*. Delhi: Khel Sahitya Kendra, 2000.
- Shaw, Dhananjoy and Gambhir, Shalini *Encyclopaedia of Sports Injuries and Indian Sports Persons*. -Delhi: Khel Sahitya Kendra, 2000.

Subject Specific Course Work
Elective Course: PHE: 863

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

PHYSIOLOGY OF EXERCISE

UNIT-I:

Anthropometric Measurements

- Why measure body structure and Composition.
- Anthropometric Measurements Detailing
- Assessment of Body Composition

UNIT-II:

Effect of Training and Exercise

- Resting Blood Pressure
- Resting Pulse Rate
- Muscular Grip Strength
- Muscular Grip Endurance

UNIT-III:

Water

- Water balance at rest
- Water balance during exercise
- Dehydration and exercise performance
- Electrolyte balance during rest
- Replacement of body fluid losses

UNIT-IV:

Weight Loss Programmed

- Weight loss in weight category events
- Methods of weight loss
- Effects of dehydration
- Rehydration
- Effect of loss of weight by exercise and restriction of diet

SUGGESTED STUDIES:

Note: References of the Books & Study material will be provided in class by the course instructor (s).

Subject Specific Course Work
Elective Course: PHE: 864

Maximum Marks: 100

Credit Points: 04

Written Exam: 60 Marks

Assignment/ Practical: 20 Marks

Seminar Presentation-20 Marks

**FITNESS AND WELLNESS IN WOMEN UNDERGOING TRANSITIONARY
CHANGES/ MIDLIFE CRISIS**

UNIT- I

- The Fitness Phenomenon : Physical Activity , Exercise And Physical Fitness , Special Benefit of Fitness
- Special Consideration While Dealing With Women: Pre, Peri, Post Menopausal phase, Physical, Physiological And Psychological Changes Associated With Midlife Crisis

UNIT – II

- Body Size And Composition : Assessment of Body Composition using Various Technique
- Calculating Body Fat Percentage Using Standardized Equation, Significance of Assessing Body Composition
- Cardio respiratory Fitness: The Significance of Assessing Cardio respiratory Fitness ,
- Administrative Suggestion, Protocol Guidelines

UNIT – III

- Measuring Flexibility : The Significance of Assessing Flexibility, Types of Flexibility, Low Back Pain , Factors Affecting Flexibility
- Measuring Muscular Strength And Endurance : The Significance of Assessing Musculo-Skeletal Fitness , Relationship Between Strength And Metabolism And Gender Difference

UNIT - IV

- Assessment of Selected Health Related Fitness Components in Women : Various Laboratory/Field Test of Cardio- Respiratory Fitness and Muscular- Skeletal Fitness
- Physiological Responses to Acute Exercise: Neuro- Muscular, Cardio- Vascular, Respiratory and Metabolic Responses, Body Composition And Chronic Adaptation

UNIT- V

- Physical Activity Participation: Physical Activity, Well Being and Exercise Adherences Long Term Benefits of Physical Activity Participation
- Modes of Exercise Participation and Their Health Benefits: Yoga, Pilate, Brisk Walking, Tia-Chi and Various other Activities

SUGGESTED STUDIES:

- Camaione David N. (1993), Fitness Management, Brown and Benchmark Communication, Inc.
- Hoeger Werner W.K, Principles And Labs for Fitness And Wellness, Thomson Wadsworth Publication
- Wilmore Jack H.(1994), Physiology of Sports And Exercise, Human Kinetics