

Annexure 'A'Curriculum and CoursesM.Sc. Sport Sciences & Physical Education (Annual System)**THEORY (Part 1)**

Paper No.	Title of Paper	Marks
M.Sc. Sport Sciences & Physical Education Part-I		
I	Sports Management and Planning Sports Facilities	65
II	Sports Nutrition	65
III	Sports Biomechanics	65
IV	Methodology of Scientific Coaching	65
V	Sports Psychology	65
VI	Human Anatomy	65
	Total Marks:-	390

PRACTICAL (Part 1)

Practical No.	Title of Practical	Marks
M.Sc. Sport Sciences & Physical Education Part-I		
I	Athletics (Long Jump, Tripple Jump, Sprint Start, Discus Throw, Shot Put)	30
II	Games (Volleyball, Football, Table Tennis, Badminton, Netball)	30
III	Educational Gymnastics (Front roll, Back Roll, Dive Roll, Head Stand, Hand Stand, Cart Wheel)	25
IV	Swimming [Basics of swimming (Breathing, Arm action, Floating, Body position), Free Style, Back Stroke]	25
	Total Marks:-	110

Curriculum and Courses
M.Sc. Sport Sciences & Physical Education (Annual System)

THEORY (Part 2)

Paper No.	Title of Paper	Marks
M.Sc. Sport Sciences & Physical Education Part-II		
I	Methods of Research in Sports	70
II	Measurement and Evaluation in Sports	70
III	Exercise Physiology	70
IV	Fitness and Wellness	70
V	Leadership in Sports	70
VI	*Optional Course / Research Thesis	70
Optional Paper: Student will have to opt any one of the following optional courses or They have to go for Research Thesis		
VI (a)	Theory of Games and Computer Application in Sports	70
VI (b)	Physical Education for Special Person	70
VI (c)	Role of media in sports	70
VI (d)	Trauma & Rehabilitation	70
VI (e)	Science of Track & Field	70
Total Marks:-		420

PRACTICAL (Part 2)

Practical No.	Title of Practical	Marks
M.Sc. Sport Sciences & Physical Education Part-II		
I	Athletics (Relay and Hurdle Races, High Jump, Javelin Throw)	30
II	Games (Hockey, Cricket, Basketball, Lawn Tennis, Handball)	30
III	Small Area Games	20
Total Marks:-		80

THEORY (Part 1)

Curriculum and Courses for M.Sc. Sport Sciences & Physical Education (Annual system) Part I & II

M.Sc. Sport Sciences & Physical Education (Part-I)

Paper – I Sports Management and Planning Sports Facilities

Course Objectives

Total Marks: 65

The main objective of this course is to:

- The focus of the course is to give the knowledge and awareness to the students about the planning of sports facilities and Management.
- This course is based on the managerial skills and knowledge. This exposure prepares the students to become Professionals in the field of Sports, for diversity of roles in the areas of Sports Marketing, Sports Financing, Facility Management and Planning.

Course Outcome

At the completion of this course the students will be able to:

- This course is designed to meet the needs of the students who are seeking a career in the areas of Sports and recreational organizations.
- Students are able to address various issues and problems related to the Management and Administration of Sports Programs.
- The course will help students to plan, locate, and know the size of Field House, Gymnasium, Stadium, and Swimming Pool facilities and other Laboratories.

Course contents

Introduction of Administration and Management

- Scope and significance of administration & management.
 - Types of managers / administrators.
 - Qualities of good managers / administrators.
 - Nature of management.
- (a) Planning (b) Organizing (c) Staffing (d) Directing and (e) Controlling

Structure, Strategies & Policies of Federations of Pakistan

Athletics, Hockey, Cricket, Football, Volleyball and Badminton

Human resource management

- Introduction
- Supervision
- Establishment of policies
- Job description
- Job induction
- Job placement
- Volunteers
- On job training
- Total quality control / total quality management (T.Q.M.)

Planning & Organizing a Sports Event

1. Bidding or applying for an event (National & International)
2. Award of the events
3. The contingent
4. Finance
5. Documentation
6. Clothing & equipment
7. Protocol
8. Customs
9. Briefing

Financial Management

- Importance of fiscal management
- Accounting
- Budgeting and Analysis
- Fund raising

Inventory and Purchasing

- Purchase procedures
- Inventories
- Care of supplies and equipment
- Maintenance of existing facilities

PLANNING PROCESS

- Basic Consideration
- Need for Area and Facilities
 - Need for Planning
 - Planning Factors
 - Planning Units – Types and Function

PLANNING FOR SPORTS & PHYSICAL EDUCATION FACILITIES

- Major Concepts
- Steps in Planning Process
- Responsibilities of Physical Educator

FACILITIES FOR RESEARCH

- General Consideration
- Teaching and Research Laboratories
- Specific Laboratories Facilities
 - Measurement and Evaluation
 - Biomechanics
 - Exercise Physiology
 - Motor Learning and Psychological Learning

PLANNING, LOCATION AND SIZE OF THE FOLLOWING FACILITIES

- Play Field
- Stadium
- Gymnasium
- Swimming Pool
- Artificial Surfaces (Indoor and outdoor)

FACILITIES FOR FACULTY AND STAFF

- Administrative Units
- Essential administrative facilities
 - Administrative Office
 - Faculty Offices
 - Audiovisual Room
 - Conference Rooms
 - Locker Shower Room
 - Toilet and Lavatory Facilities

CONSERVATION AND MAINTENANCE OF SPORTS INFRASTRUCTURE

- Understanding of PC-I
- Compilation of PC-I

Recommended Books (Latest Editions of Following Books)

1. Foundation of Sports Management: Andy gillentine & Brain Crow: 2005
2. Management of Physical Education and Sport
Charles A. Bucher and March L. Krotee : Mc Graw Hill, 2002
3. The Management of Sports
Bonnie L. Parkhouse: Mc Graw-Hill International Edition: 2008
4. Ethics and Morality in Sports Management
Joy T. Desensl. Danny Rosenberg, 2003
5. Human Resource Management in Olympic Sport Organization: Packianathan Chelladurai and
Alberto Madella: 2006
6. Sports Management and Administration
David C. Watt: 2005
7. Sport Management Field Experiences
Jacquelyn Cuneen, M.Joy Sidwell: 2005
8. Sport Administration Manual
International Olympic Committee
9. Sport & Safety Management
Steve Fosdick, Lynne Walley: 2003
10. S.A.F.E. Play Areas Creation Maintenance and Renovation.
Donna Thompson, Susan D. Hudson and Heather M. Olsen: 2007
11. Sport in Consumer Culture
John Horne: 2006
12. Sports Injuries
Lars Peterson, Per renstron: 2001
13. Sport Facility Management Organizing Events and Mitigating Risks
Robin Ammon, Jr. Richard M. Southall David A. Blair: 2005

Paper – II Sports Nutrition

Course Objectives

Total Marks: 65

The main objective of this course is to:

- It will help Students to learn about the weight control Strategies and are provided with the in-depth study of Carbohydrates, Lipids, Proteins, Hormones and Enzymes during exercise.
- The students will be able to understand the Ergogenic aids and Muscular Performance.

Course Outcome

At the completion of this course the students will be able to:

- Plan their nutrition.
- This course intends to enlighten the students for the food requirements for sportsmen, before, during and after the competition.
- Control and manage their body weight.

Course contents

Introduction

- Introduction of nutritional terms including nutrition, nutrient, diet, digestion, absorption, excretion, metabolism and energy etc.
- Importance of nutrition in exercise and sports
- Functions of food.

Energy

- Introduction to energy
- Conversion from food to energy
- Measurements of energy contents of food.
- Measurement of energy expenditure (B.M.R and B.M.I)
- How is energy released from the food and stored in the body (energy transfer)?
- Energy systems

Energy in to muscular activity

- How energy is consumed during exercise
- The muscles and energy
- Which fuels are used during exercise
 - a) Low intensity
 - b) Sub maximal intensity
 - c) Maximal intensity
- Exercise duration
- Fatigue and its causes

Nutrition, Exercise and Sports

- Carbohydrate loading
- Pre contest and after contest meals

Energy Sources

- Types, metabolism and function of the following and their R.D.A. (recommended daily allowance) carbohydrates, fats, lipids, proteins, vitamins and minerals.

Fluid Balance and Exercise

- Water, total body water, functions of water, water balance, water intake, water elimination and R.D.A. of water.
- Temperature Regulation during exercise.
- Rate of gastric emptying
- Adequate hydration before during and after exercise
- Dehydration

Eating Disorders

- Eating disorders of depressed athlete
- Caffeine's effects on metabolism

Recommended Books (Latest Editions of Following Books)

1. Nutrition for All: Hamid I B & Zafar Iqbal Butt
2. Nutrition for Health, Fitness and Sports: Melvin H. Williams.
3. Nutritional Assessment: Robert D. Lee., David C. Niemen
4. Perceptive in Nutrition: Gordon M. Wordlaw
5. Personal Nutrition: Marie A. Boyle, Eleanor Noss Whitney
6. The Encyclopedia of Nutrition and Good Health: Robert A. Ronzio.

Paper – III Sports Biomechanics

Course Objectives

Total Marks: 65

The main objective of this course is to:

- The purpose of the course is to introduce students to concepts of mechanics as they apply to human movement, particularly those pertaining to exercise, sport, and physical activity
- The student should gain an understanding of the mechanical and anatomical principles that govern human motion and develop the ability to link the structure of the human body with its function from a mechanical perspective.
- This course presents the in-depth study in functional anatomy and mechanics of human movement.
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Course Outcome

At the completion of this course the students will be able to:

- Describe motion with precise, well-defined mechanical and anatomical terminology.
- Understand and quantify linear and angular characteristics of motion;
- Understand the quantitative relationships between angular and linear motion characteristics of a rotating body; and
- Understand and quantify the cause and effect relationship between force and linear and angular motion.
- It will enhance understanding of students regarding the integration of anatomical and mechanical aspects of human motion

Course contents

INTRODUCTION

- a. Definition and Prospective
- b. Why study Biomechanics
- c. Importance of Biomechanics for Coach and Athlete
- d. Qualitative & Quantitative Biomechanical Analysis

HUMAN MOMENTS

- a. Form of Motion
- b. Linear
- c. Angular
- d. General Motion
- e. Types of Movements
- f. Factor effecting Human Movement

KINETIC CONCEPTS FOR ANALYZING HUMAN MOTION

- a. Linear Kinetics:

Inertia, Mass, Force, Newton's Laws of Motion. Friction, Impulse, Conservation of Momentum, impact, Pressure, work

- b. Angular Kinetics:

Eccentric Force, Moment, Resultant Moment, Equilibrium, levers-Center of Gravity, Moment of Inertia, Angular, Momentum, Centripetal and Centrifugal force

KINEMATIC CONCEPTS FOR ANALYZING HUMAN MOTION

- a. Linear Kinematics:

Vectors and Scalars, Distance and Displacement, Speed and Velocity, Acceleration, Projectile Motion

- b. Angular Kinematics:

Angular Distance and Displacement, Angular Speed, Velocity and Acceleration

HUMAN MOVEMENT IN FLUID MEDIUM

a. Nature of Fluids

- i. Laminar versus Turbulent flow

b. Fluid properties

- i. Buoyancy:
 - a). Characteristic of Buoyancy forces
 - b). Flotation
 - c). Flotation of the Human Body

c. Drag

- i. Skin friction, Form Drag, Wave Drag

d. Lift Forces

- i. Foil shape
- ii. Magnus Effects

BIOMECHANICAL ANALYSIS OF SPORTS TECHNIQUES

- a. Cricket
- b. Football
- c. Basketball
- d. Handball
- e. Gymnastics
- f. Hockey
- g. Badminton
- h. Table Tennis
- i. Track & Field (Running, Throwing & Jumping)
- j. Swimming
- k. Volleyball

Recommended Books (Latest Editions of Following Books)

1. Basic Biomechanics Fifth Edition 2006
Susan J. Hall
2. Sports Biomechanics Reducing Injury and improving Performance
Roger Bartlett: 1999
3. Principles of Biomechanics and Motion Analysis
Iwan W. Griffiths
4. Research Method in Biomechanics
D. Gordon E. Robertson, Graham E. Caldwell, Joseph Hamill, Gary Kamen & Saunders N. whittlesy
5. Sport & Exercise Biomechanics
Paul Grimshaw, Adrain Lees, Meil fowler & Adrian Burden: 2006
6. Introduction to Sport Biomechanics
Roger Bartlett: 2010
7. Applied Anatomy and Biomechanics in Sport
Timothy R. Acklad, Bruce C. Elliott, John Bllomfield: 2009
8. Biomechanics of Sport and Exercise
Peter M. McGinnis: 1999
9. Biomechanics and Exercise Physiology
Arthur T Johnson: 1997
10. An Introduction to Biomechanics of Sport & Exercise
James Watkins: 2007

Paper – IV Methodology of Scientific Coaching

Course Objectives

Total Marks: 65

The main objective of this course is to:

- This course is designed to prepare qualified coaches for various Sports/ Games.
- The purpose of this course is to provide knowledge about scientific coaching to maintain professionalism, fulfill the responsibilities, to manage the sports training stages, organize the training designed and mature application of teaching the well manners.
- To develop an individual coaching philosophy.
- To understand the applications of basic principles of psychology and physiology as they pertain to coaching individuals and teams.
- To help the coach become more sensitive to the individual needs and differences of their athletes.

Course Outcome

At the completion of this course the students will be able to:

- Students after going through this course would be able to learn latest coaching techniques to facilitate their Professional Competence.
- To enable the coach to use effective motivation and communication techniques for various sport situations.
- This course is designed to prepare qualified coaches for various Sports/ Games

Course contents

Introduction to sports coaching

- Introduction and nature of coaching profession

Role of a Coach

- Coaching philosophy
- Coaching style

Coaching of major games

- Athletics
- Cricket

- Hockey
- Football
- Volley Ball
- Badminton

Development of Skill Analysis and Strategies

- Physical training
- Mental training
- Technical training
- Tactical training

Periodization of Training

- Off season training
- Pre season training
- Peak season training
- Macro training
- Micro training
- Warming up
- Cooling down

Teaching Methodology for a Coach

- Skill, Technique and Ability
- Skill Development

Components of Fitness

- Health Related Fitness (Need, Importance & Improvement)
- Skill Related Fitness (Need, Importance & Improvement)
- Training Principles (Need, Importance & Improvement)

Recommended Books (Latest Editions of Following Books)

1. The Scientific Aspects of Sports Training: A. W. Taylor.
2. Sports Coaching Concepts; A Framework for coaches' behavior: John Lyle.
3. Scientific Principles of Coaching: Englewood Cliff
4. Coaching Basketball: Jerry Kraus and Ralph Pim
5. Scientific Foundation of Coaching: Pate Rotella Mcclenaghan
6. Psychology of Coaching: John D. Lawther

Paper – V Sports Psychology

Course Objectives

Total Marks: 65

The main objective of this course is to:

- The focus is primarily in helping athletes using psychological Principles and skills to achieve optimal mental health and to enhance performance
- This course intends to provide an insight into the Psychological factors associates with Sports Performance, Exercise and other type of Physical activities.

Course Outcome

At the completion of this course the students will be able to:

- Students will able to treat Psycho-Pathological disorders of the athletes.
- Students are guided to provide psychological assistance with injury rehabilitates, pain tolerance, performance enhancement, relaxation etc

Course contents

SPORTS PSYCHOLOGY

- a. Definition of Sports Psychology
- b. Branches of Psychology with Special Reference to Exercise And Sports
- c. Applications of Psychology in Sports
- d. Role of Sports Psychology

STRESS, ANXIETY AND AROUSAL RELATIONSHIP

- a. Differentiating Among Stress, Anxiety and Arousal
- b. Concept of Stress
- c. Concept of Anxiety
- d. Concept of Arousal

AGGRESSION, MOTIVATION AND SELF CONFIDENCE IN SPORTS

- a. Bandura's Theory (Model) Of Self-Efficacy
- b. Developing Self-Confidence through Self Talk
- c. Guide to Promoting Positive Self Thoughts and Smart Talk

- d. Commitment
- e. Types and Theories of Aggression

GOAL SETTING, ATTENTION AND CONCENTRATION IN SPORTS

- a. Reasons for Goal Setting
- b. Principles for Effective Goal Setting
- c. Attention and Types of Attentional Focus
- d. Attention and Maximizing Performance

IMAGERY AND PERFORMANCE

- a. Definitions of Imagery
- b. Benefits of Imagery
- c. Steps for Becoming Proficient in Imagery
- d. Imagery before and during Competition

COGNITIVE AND BEHAVIOURAL INTERVENTIONS OF SPORTS PERFORMANCE

- a. Relaxation Strategies in Sports
- b. Coping Strategies
- c. Arousal Energizing Strategies
- d. Hypnosis

Sports Cohesions

- Introduction and types of cohesion
- Measurement of cohesion
- Factors effecting cohesion
- Interventions to enhance sports cohesion
- Introduction of conflicts
- Types of conflicts
- Strategies of conflict management

Recommended Books (Latest Editions of Following Books)

1. John H. Kerr, 2005 Rethinking Aggression and Violence in Sports 2006
2. Fair Play in sport
Sigmund Loland: 2006
3. Motivation and Emotion in Sport
John H. Kerr: 2002
4. The Sport Psych Handbook
Shane Murphy: 2005
5. Comprehensive Stress Management
Jerrold S. Greenberg: 2002
6. Imagery in Sport
Tony Morris, Michael Spittle, Anthony P. Watt: 2005
7. Managing Performance Stress Model and Methods
David Pargman: 2006
8. L.L.E. William Jack Judy A Blucher, Psychology of Coaching Theory and Application, Subject Publication, Delhi, 1982.
9. Morgan William P. Contemporary Readings in Sports Psychology Spring Field, Minois, USA, 1970.
10. John D. Lauther: Sports Psychology, Prentice Hall Inc. Englewood.
11. John H. Kerr, 2005 Rethinking Aggression and Violence in Sports 2006
12. Fair Play in sport Sigmund Loland: 2006
13. Motivation and Emotion in Sport John H. Kerr: 2002
14. The Sport Psych Handbook Shane Murphy: 2005
15. Comprehensive Stress Management Jerrold S. Greenberg: 2002
16. Imagery in Sport Tony Morris, Michael Spittle, Anthony P. Watt: 2005
17. Managing Performance Stress Model and Methods David Pargman: 2006

Paper – VI Human Anatomy

Course Objectives

Total Marks: 65

The main objective of this course is to:

- This course is designed to introduce Structures of human body related to Sports Science
- Emphases will be on muscular and skeletal systems, frequently encountered in the teaching & coaching of Sports.
- It will provide knowledge of human anatomy and body parts such as head and neck, thorax, abdomen and pelvis, Skeleton, Bones Tissues, Joints and Muscles to acquaint students with initial information about human body structure and functions.

Course Outcome

At the completion of this course the students will be able to:

- After successful completion of the course, students will have thorough knowledge of Cardio Vascular System, Respiratory system, Digestive System, etc.
- This study will help to know the impact of Exercise on human Structure to enhance student's appreciation on the Value of Exercise.

Course contents

Introduction

- Definition
- Significance

Bones & Joints

- Gross Anatomy of Bones
- Description of the key joints
 - Shoulder
 - Elbow
 - Wrist
 - Hip
 - Knee
 - Ankle

Skeletal Muscles

- Gross Anatomy of skeletal muscles and related actions
- Description of the major muscles of the body
 - Pictorial Girdle
 - Biceps & triceps
 - Abdominal Muscles
 - Back Muscles
 - Quadriceps
 - Hamstrings
 - Calf Muscles (Superficial Group)

Nervous System

- Gross Description of Brain and Spinal Cord
- Autonomic Nervous System
 - Sympathetic & Para Sympathetic Nervous System

Digestive System

- Gross Anatomy of Digestive System
- Digestion and Absorption of Food

Cardiovascular System

- Anatomy and Circulation of Blood in the Heart
- Gross Description of Artery, Vein, Capillary

Respiratory System

- Gross Anatomy of Respiratory Track and Lungs
- Gaseous Exchange

Endocrinology

- Endocrine Glands & Hormonal Actions
 - Pituitary Glands
 - Thyroid Glands
 - Pancreas
 - Adrenal Glands
 - Gonads
- Hormones acting on Muscles

Recommended Books (Latest Editions of Following Books)

1. Basic Anatomy and Physiology in Human Body: Robert J. Macklentic
2. Human Anatomy with Cot Dissection: Patricia J. Donnelly
3. Saladin, K.S. *Anatomy & Physiology*. 3rd edition. New York: McGraw Hill, 2004.
4. Chaurasia, B.D. *Human Anatomy*. 4th ed. New Delhi: CBS, 2004.
5. Marieb, E.N. Human. *Anatomy and Physiology*, 4th ed. New York: Benjamin, 2004.
6. Elaine N. Marieb. *Human Anatomy & Physiology*, The Benjamin/Cummings Publishing Company, USA, 2002.
7. Seeley, Rod. R. *Anatomy & Physiology*. 7th ed. McGraw Hill New York, 2006.
8. Widmaier, Eric. P. *Human Physiology: The mechanism of body Function*. 10th ed. McGraw Hill New York, 2006.

PRACTICAL (Part 1)

Curriculum and Courses for M.Sc. Sport Sciences & Physical Education (Annual system) Part I & II

M.Sc. Sport Sciences & Physical Education (Part-I)

Practical – I Athletics

Course Objectives

Total Marks: 30

The main objective of this course is to:

- The main purpose of this course is to enhance the knowledge of the students regarding Track & Field.
- The focus of the course is to equip the students with the latest rules and regulations laid down by I.A.A.F. (International Amateur Athletic Federation).
- This course will also be helpful in developing the skill of the students regarding the marking, and laying out the standard track and other circles and marking of the track
- The outline of this practical course is prepared with the purpose to provide basic technical knowledge to the students and familiar with modern approach for developing the skills in Athletic Track and Field events enabling them to developed courage, determination, speed, endurance and self-reliance

Course Outcome

At the completion of this course the students will be able to:

- The students will be able to conduct the track and field competitions at various levels as well as to perform the duties of technical officials.
- Through this course students are tuned to get the required information regarding Practical knowledge of marking the tracks, judgment and officiating for various Athletic Events including: Running, Jumping, and Throwing etc

Course contents

SPRINT RACES

➤ Skill Area

Different starts, Correct Running style, Usage of Starting Blocks, False Start, Finishing,

SHOT PUT

➤ Skill Area

Grip or Hold, Stance, Styles of Putting, Optimum projection angle

LONG JUMP & TRIPPLE JUMP

➤ Skill Area

LONG JUMP: Approach run up, Take off, Flight through the air, Landing, Long Jump Styles (Stride jump, Hang style, Hitch Kick style)

TRIPPLE JUMP: Approach phase, Hop phase, Step phase, Jump phase, Arm action (Single arm action, Double arm action), Landing

DISCUS THROW

➤ Skill Area

Grip or Hold, Stance, Throwing Technique, Optimum projection angle,

COACHING OF ALL EVENTS

How to learn the skill, How to improve the skill by using scientific coaching methods (Health related fitness + Skill related fitness + Periodization of training + Nutrition + Energy System Involved)

OFFICIATING OF ALL EVENTS

Dimensions, Equipment used, Rules, Governing bodies, No. of Officials and Their roles, Different signs used during Refreeship/Judging/Umpiring

Recommended Books (Latest Editions of Following Books)

1. M.B. Davies, Physical Training, Games and Athletics in Schools, New Delhi, 2005.
2. Dr. M. L. Kamlesh, Athletic Personality: A Psychological Probe, New Delhi, 2005.
3. Ekta, Teaching and Coaching Athletics, New Delhi, 2004.
4. O.P. Sharma, Athletics Skills & Rules, New Delhi, 2003.
5. Guy Butler, Athletics & Training, New Delhi, 2003.

Practical – II Games

Course Objectives

Total Marks: 30

The main objective of this course is to:

- The fundamental objective of this course is to equip the students with the update knowledge regarding rules and regulations of various team Sports and knowledge of dimension and judgment and officiating for different games.
- The focus of the course is to develop skill in students about the different types of sports.
- This practical course has been design with the purpose to provide technical knowledge to students develop their skill in selected games.

Course Outcome

At the completion of this course the students will be able to:

- Understand about officiating of different games.
- Organizing of different types of tournaments.
- It will provide practical knowledge of Coaching
- It will also help the students to develop and polish their leadership qualities and sports-man spirit.

Course contents

FOOTBALL OR SOCCER

- **Skill Area**

Passing, Stopping, Kicking, Dribbling, Heading, Drive, Throw in, Volley, Half Volley, Corner Kick, Penalty Kick, Off Side, Chest trap, Chip Pass, Direct and Indirect Free kick,

BADMINTON

- **Skill Area**

Service, Drive (A fast and low shot that makes a horizontal flight over the net) **Drop, Flick** (A quick wrist and forearm rotation that surprises an opponent by changing an apparently soft shot into a faster passing one; used primarily on the serve and at the net), **Kill** (Fast, downward shot that cannot be returned), **Smash, Net Shot** (Shot hit from the forecourt that just clears the net and drops sharply), **Push Shot** (Gentle shot played by pushing the shuttle with little wrist motion, usually from net or midcourt to the opponent's midcourt), **Rally,**

VOLLEYBALL

- **Skill Area**

Serving, Blocking, Digging, Rotation, Setting, Spiking, Passing, Attacking, Libero Role

NETBALL

- **Skill Area**

Receiving, Dribbling, Defense, Footwork, Shooting, Vision, Conclusion

TABLE TENNIS

- **Skill Area**

Serving, Hold/Grip on Racquet, Blocking, Chopping, Drive, Drop Shot, Forehand, Backhand/Chop, Lob, Loop, Smash, Top spin, Back spin, Flip

COACHING OF ALL GAMES

How to learn the skill, How to improve the skill by using scientific coaching methods
(Health related fitness + Skill related fitness + Periodization of training + Nutrition + Energy System Involved)

OFFICIATING OF ALL GAMES

Dimensions, Equipment used, Rules, Governing bodies, No. of Officials and Their roles, Different signs used during Refreeship/Judging/Umpiring

Recommended Books (Latest Editions of Following Books)

1. Dr. P. Modak, Rules and Principles of Sports & Games, New Delhi, India, 2005.
2. Dr. Anil Sharma, Sports Laws (with latest Rules and Management), New Delhi, India, 2004.
3. Dr. Anil Sharma, O.P. Sharma, The Illustrated Encyclopedia of Rules in Sports & Games, New Delhi, Sports Publication, 2004.
4. B.K. Chaturvedi, Rules and Skills of Games & Sports, New Delhi, Goodwill Publishing House, 2003.

Practical – III Educational Gymnastics

Course Objectives

Total Marks: 25

The main objective of this course is to:

- The fundamental objective of this course is to equip the students with the practical knowledge regarding Front Roll, Back Roll, Head Stand, Hand Stand, Dive Roll and Cart Wheel
- The focus of the course is to develop Flexibility in students with the help of educational Gymnastics
- The purpose of introducing this practical course on Gymnastic Apparatus work is to provide students the basic training to acquire knowledge to participate in healthful activities effectively as means of improving the physical fitness of the youth

Course Outcome

At the completion of this course the students will be able to:

- Understand about basics of Gymnastics.
- It will help to reduce the risk of injury in sportsmen and common persons as well.
- It will provide practical knowledge of Coaching of Educational Gymnastics

Course contents

➤ **Skill Area**

Front Roll, Back Roll, Head Stand, Hand Stand, Dive Roll and Cart Wheel

➤ **Coaching**

How to learn the skill, How to improve the skill by using scientific coaching methods (Health related fitness + Skill related fitness + Periodization of training + Nutrition + Energy System Involved)

➤ **Officiating**

Dimensions, Equipment used, Rules, Governing bodies, No. of Officials and Their roles, different signs used during Refreeship/Judging/Umpiring

Recommended Books (Latest Editions of Following Books)

1. Renu Jain, Men Gymnastics Coaching, New Delhi, 2005.
2. Anoop Jain, Gymnastics Rule Book 2004, New Delhi, 2004.
3. M.B. Davies, Physical Training in Schools, New Delhi, 2004.
4. Renu Jain, Play & Learn Gymnastics, New Delhi, 2004.
5. David Pearson, Play the Game Gymnastics, Great Britain, 1991.

Practical – IV Swimming

Course Objectives

Total Marks: 25

The main objective of this course is to:

- The fundamental objective of this course is to equip the students with the practical knowledge of Swimming
- The focus of the course is to develop Swimming skill in students with the help Scientific coaching and biomechanical analysis

Course Outcome

At the completion of this course the students will be able to:

- Understand about basics of Swimming.
- It will help to learn the skill of free style stroke and back stroke of swimming.
- It will provide practical knowledge of Coaching of Swimming

Course contents

➤ Skill Area

Swimming (Free style, Back stroke), Basics of swimming (Breathing, Arm action, Floating, Body position)

➤ **Coaching**

How to learn the skill, How to improve the skill by using scientific coaching methods
(Health related fitness + Skill related fitness + Periodization of training + Nutrition +
Energy System Involved)

➤ **Officiating**

Dimensions, Equipment used, Rules, Governing bodies, No. of Officials and Their roles,
Different signs used during Refreeship/Judging/Umpiring

Recommended Books (Latest Editions of Following Books)

1. B.K. Chaturvedi, Rules and Skills of Games & Sports, New Delhi, Goodwill Publishing House, 2003.
2. M.B. Davies, Physical Training in Schools, New Delhi, 2004.
3. Dr. P. Modak, Rules and Principles of Sports & Games, New Delhi, India, 2005.

THEORY (Part 2)

Curriculum and Courses for M.Sc. Sport Sciences & Physical Education (Annual system) Part I & II

M.Sc. Sport Sciences & Physical Education (Part-II)

Paper – I Methods of Research in Sports

Course Objectives

Total Marks: 70

The main objective of this course is to:

- This course will create awareness of the potential role of research in professional development of prospective sports managers
- In addition this course will equip students with prerequisite knowledge and skills necessary to become good researchers, which is going to develop the research mindedness and aptitude among the students to infuse the knowledge in their routine practices.

Course Outcome

At the completion of this course the students will be able to:

- Identify the researchable problems being faced by the sportsmen and sports organizations.
- They can also develop research proposals and plan and carryout research projects this solving the problems in sports sciences and also learn to formulate research designs, data analysis and result interpretations.
- It will assist students in gaining the knowledge and skills they need in order to compete in the job market and to contribute to their future careers.

Course contents

INTRODUCTION TO RESEARCH

- a. Definition and meaning of research
- b. Characteristics of research
- c. Type of research
- d. Need and importance of research in Physical Education.

NATURE OF INQUIRY

- a. The search for truth.
- b. Methods of acquiring knowledge, (authority, inductive reasoning method, deductive reasoning method, scientific method of inquiry).
- c. Scientific Method: identification of the problem, formulation of hypotheses, collection of data, analysis and interpretation of data.
- d. Concepts & Variables
- e. Theoretical & Conceptual Framework

METHODS OF RESEARCH

- a. Historical research
- b. Descriptive research
- c. Experimental research

TOOLS FOR DATA COLLECTIONS

- a. Questionnaire
- b. Interviews
- c. Tests
- d. Observation
- e. Use of relevant and reference materials, Note taking

SAMPLING

- a. Sampling
- b. Types of sampling
- c. Sampling procedure

THE RESEARCH PROBLEM

- a. Identification of the problems
- b. Criteria of selecting the problems
- c. Sources for locating the problems
- d. Problems evaluation
- e. Limitations, Delimitation, Assumption

RESEARCH PROPOSAL

- a. Developing the research proposal
 - i) Statement of the problems
 - ii) Significance of the problems
 - iii) Objectives of the study
 - iv) Hypotheses
 - v) Procedure of the study
 - vi) Limitation/delimitation and scope of study

WRITING THE RESEARCH REPORT

- a. Pattern or style of research report
- b. The structure components of research report
Term report, Dissertation, Thesis, Foot notes, References Bibliography.

Recommended Books (Latest Editions of Following Books)

1. Research Methods for Sport Studies: Chris Gratton and Ian Jones. 2005
2. Research Methods in Physical Activity: Jerry R. Thomas – Jack K. Nelson – Stephen J. Silverman.
3. Methodolgy of Research: Shafqat Rasool & Mahjabeen Shafqat
4. Doing Masters Dissertation
Chris Hart: 2005
5. Research Methodology A Step by Step Guide for Beginners
Ranjit Kumar: 2005
6. Research Design and Methods
Kenneth S. Borden & Bruce B. Abbott. 2005
7. The Essential Guide to doing research
Zina O'Leary 2004
8. Research in Physical Education
Dr. Khalid Rashid
9. Your Research Project
Nicholas Walliman: 2009
10. Data Analysis and Research for Sport and Exercise Sciences
Graig Williams and Chris Wragg: 2006

Paper – II Measurement and Evaluation in Sports

Course Objectives

Total Marks: 70

The main objective of this course is to:

- Define and describe terminology that applies to measurement and evaluation.
- Complete statistical computations as they apply to health and physical education.
- Become familiar with current and new assessment practices in the schools
- This course aims to provide the students a comprehensive coverage regarding measurement and evaluation in Sports, why it is important, it includes: Probability theories sampling, T tests, Chi-Square, Analysis of Variance, (ANOVA) linear and multiple regression in Sports

Course Outcome

At the completion of this course the students will be able to:

- Formulate an appropriate way to grade students in the school setting to include authentic assessment and rubrics.
- Administer a variety of tests as they apply to physical education, health and fitness.
- Analyze and interpret data collected from a test appropriate to our field.
- Develop questions to assess the cognitive domain for a variety of written test formats.
- Analyze and evaluate various fitness movements.
- Develop an evaluation process for assessing the affective domain
- Students would be able to the application of different measurement techniques in testing Physical and motor ability and other specific sports skill, e.g.; Endurance, Strength, flexibility, power, speed, etc

Course contents

INTRODUCTION

- a. Definitions of test, measurement and evaluation
- b. Importance of measurement and evaluation in Physical Education
- c. Basic principles of evaluation
- d. Types of Measurement & Evaluation
- e. Basic Units of Measurement

BASIC STATISTICS

- a. What is statistics (Mean, Median, Mode)
- b. Standard Deviation
- c. Normal curve
- d. Correlation
- e. Standard scores (Z. Scores-T. Scores)
- f. Anova Test
- g. Uses of SPSS for Testing

Construction & Characteristics of standard test

Test construction and guidelines criteria required for a standard test.

Validity

- Criterion referenced measurement
- Norm referenced measurement
- Validity of criterion referenced measurement
- Validity of norm referenced measurement
- Factors affecting validity

Reliability

- Reliability of criterion referenced measurement
- Reliability of norm referenced measurement
- Factors affecting reliability

Objectivity

- Administrative feasibility

Administration of a Test

- Test administration
- Pre test responsibilities
- Testing responsibilities

- Post test responsibilities

RATING SCALES IN PHYSICAL EDUCATION

- Construction of Rating Scales
- Rules for the use of Rating scales
- Types of Rating devices

Grading in Physical Education

- Purpose of grading
- Criteria of grading
- Methods of grading

MEASUREMENT OF PHYSICAL FITNESS

- a. Definition of Physical Fitness
- b. Components of Physical Fitness
- c. Physical Fitness index
- d. Measurement of Motor Fitness

GENERAL MOTOR ABILITY

- a. Definition of Motor Ability
- b. Measurement of Motor Ability
- c. Components of Motor Ability

CARDIOVASCULAR FITNESS

- a. Definition
- b. Measurement of Cardiovascular Fitness

MEASUREMENT OF SPECIFIC SPORT SKILLS

- a. Hockey
- b. Football
- c. Basketball
- d. Badminton
- e. Volleyball
- f. Tennis
- g. Track & Field (one event from each group)

Recommended Books (Latest Editions of Following Books)

1. Nilgoose, Erle: "Evalation in Health Education and Physical Education", New York, mcgra-Eill Book Co., Inc.
2. Cureton, Thomas K. "Physical Fitness Appraisal And Guidance" St. Louis, The Mosby Company, 1947.
3. Bovard John F., Frederich W., Hagman, Parclcia E., "Test And Measurement In Physical Education ", Philadelphia, W.B.,Sounders Company, 1949.
4. Meyers, Cariton R. And Blesh, Erwin T. "Measurement In Physical Education", New York, The Fonald Press Company, 1962.
5. Campbell, W.R. and Tauker, N.M. "An Introduction To Test And Measurement In Physical Education", London, C.Bellk & Sons Ltd., 1967.
6. Hunsicker, Paul A., and Monteyer, Hendry J. "Applied Tests And Measurements In Physical Education" New York, Prentice Hall, 1953

Paper – III Exercise Physiology

Course Objectives

Total Marks: 70

The main objective of this course is to:

- This course will also train individuals in the science of exercise and sports and nutritional science
- This course intends to strengthen the basic understanding of energy metabolism, Nutrition, Physiological responses to exercise and training
- Course content make the students learn about the adaptation of human organism to various sports exercise.

Course Outcome

At the completion of this course the students will be able to:

- Students should have a well rounded knowledge of nutrition as well as a special knowledge of sports nutrition.
- To place more importance on the study of aerobics and anaerobic metabolism and cardio respiratory functions and they are able to understand the Physiological demands of different Sports..
- This will lead to possible employment in both fields: sports exercise and nutrition

Course contents

Introduction of Physiology

- i. Definitions of sports physiology
- i. Nature, scope and application of sports physiology

Conditioning in Sports

- i. Muscular flexibility, strength endurance
- ii. Principles of sports training
- iii. Over training

Cardiovascular Systems

- i. Stroke volume, heart rate & Cardiac output
- ii. Effects of exercise on heart
- iii. Blood pressure and effects of exercise on Blood Pressure

Respiratory System

- i. Gaseous exchange
- ii. Respiratory volumes
- iii. Effects of exercise on respiratory system
- iv. Hemoglobin Dissociation Curve

Exercise and Environments

- i. Environmental factors in training
- ii. Temperature regulations
- iii. Exercise and temperature regulation in hot climate
- iv. Humid climate (Hyponatrimia)
- v. Hot and dry climate
- vi. Heat stroke
- vii. Cold climate (Hypothermia and Frostbite)
- viii. Air pollution
- ix. Fatigue and its causes
- x. High altitude effects on exercise

Doping

- i. Definition of doping
- ii. Historical background
- iii. Aims & Objectives of IOC regarding Doping
- iv. Role of I.O.C And WADA
- v. List of Banned Drugs by I.O.C.
- vi. Types of doping tests
- vii. Prevention of doping

Recommended Books (Latest Editions of Following Books)

1. Dr. Muhammad Asif, Exercise Physiology, Lahore, 2004-05.
2. Reilly T and Williams, 1990, Physiology of Sports (E&FN Spon, London).
3. Ardle William D Mc, 1988, Exercise Physiology, Lea Febuser, 600 Washing to Square, Philadepia, PA 19106 USA, ISBN 9-07, 100114.
4. Reilly T, 1990, Physiology of Sports, C.V. Brown Publisher, New York, USA.
5. 1989, Powers Exercise Physiology, C. Brown Publisher, New York, USA.
6. Shaver, 1990, Essentials of Exercise Physiology, Jitandir Vij Publisher, New Delhi, India.

Paper – IV Fitness and Wellness

Course Objectives

Total Marks: 70

The main objective of this course is to:

- This course will provide opportunities to familiarize students with the importance of Fitness for general purpose and for sports.
- This course will help a sports man to enhance his/her performance. It will help to a common person to care about his/her health and fitness

Course Outcome

At the completion of this course the students will be able to:

- After successful completion of the course, students will have thorough knowledge of health related fitness and skill related fitness.
- Students will able to understand the impact of Exercise on human body to enhance student's appreciation on the Value of Exercise

Course contents

INTRODUCTION

- Facts about health and wellness
- Facts about physical fitness
- Facts about healthy lifestyle

Readiness for Physical Activity

- Warm up and Cool Down

How much Physical activity is enough

- The principles of physical activity
- Physical activity Pyramid
- Facts about physical activity
- patterns and strategies for action

Health benefits of physical activity

Safe Physical activity and exercises

Basic resistance training program

General physical fitness & sports specific fitness program

Weight management

Illicit drugs: Use, Misuse and abuse

Recommended Books (Latest Editions of Following Books)

- Concepts of Fitness & Wellness: Charles B Covin, Ruth Lindsey, Gregory I. Welk
- Wellness Concepts and Application: David J. Anspaugh, Michael H. Hamrick, Frank T. Rosato
- Fit & Well: Thomas D. Fahey, Paul M. Insel, Walton T. Roth
- Concepts of Physical Fitness: Charles B. Covin, Ruth Lindsey, Greg Welk
- Encyclopedia of Athletics, by The Hamlyn Publishing Group – 1985

Paper – V Leadership in Sports

Course Objectives

Total Marks: 70

The main objective of this course is to:

- This course is to facilitate the future leaders to develop essential Leadership skills needed to address complex sports issues.
- It will facilitate the future leaders to develop essential Leadership skills needed to address complex sports issues.

Course Outcome

At the completion of this course the students will be able to:

- It will enable students to understand the frame work, the roles and functions of the leaders in an effective organization.
- Understand the responsibilities of a sports leader

Course contents

Leadership

- Introduction of leadership
- Types of leadership
- Theories of leadership
- Qualities of an effective leader
- Difference between leader & manager
- How to develop leadership

Leadership Positions in Sports and Physical Education

Role and Contribution of Leader in Development and Promotion of Sports

Meetings

- Notice of Meeting
- The Agenda
- Conducting a Meeting
- Tips for a good Meeting
- Minutes of Meeting
- Report Writing

Communication

- Introduction of Communication
- Types of communication
- Methods of communication
- Network of communication
- Barriers to effecting communication
- Press release, press conference, media coverage
- Annual reports of individual and organization a performance

Decision Making

- Introduction of Decision Making Sports
- Types of managerial decisions
- Models of decision-making

Fair Play in Sports

Recommended Books (Latest Editions of Following Books)

1. Fair Play in Sport Sigmund Loland: 2006
2. Effective Leadership in Adventure Programming, Simon Priest, Michael A. Gass: 2005
3. Outdoor Leadership Theory and Practice
Bruce Martin, Christine Cashel, Mark Wagstaff, May Breuning: 2006
4. Performance Leadership Frank Buytendijk: 2009
5. Brilliant Leader Simon Cooper: 2010
6. Sport Administration Manual International Olympic Committee

Optional Paper: Students will have to opt any one of the following optional course

Paper – VI (a) Theory of Games and Computer Application in sports

Course Objectives

Total Marks: 70

The main objective of this course is to:

- The fundamental objective of this course is to equip the students with the update knowledge regarding rules and regulations of various team Sports and knowledge of dimension and judgment and officiating for different games.
- The focus of the course is to provide knowledge to students about the different types of tournaments and how they can be organized efficiently.
- This course provide opportunities to familiarize students with computer administrative functions of Word Processing, Database Management and Electronic Spread Sheets, and Students learn how to analyze research Programs related to high Performance in Sports.

Course Outcome

At the completion of this course the students will be able to:

- Understand about officiating of different games.
- Organizing of different types of tournaments.
- Students will be able to learn the internet usage as well as appropriate Computer software in Classrooms as well as different Sports settings
- It will also help the students to develop and polish their leadership qualities and sports-man spirit.

Course contents

Types of Tournaments

- Round Robin (League system)
- Elimination (knock out)
- Combination
- Consolation
- Double elimination
- Ladder
- Pyramid

Rules and techniques of the following games and their application

- Badminton
- Basket ball
- Cricket
- Football (for boys)
- Hand ball
- Hockey
- Lawn tennis
- Table tennis
- Volley ball

Introduction to Computer Application

- What is Computer
- importance of computer literacy
- Identify the components of a computer
- Types of Computers
- Types of Users

Computer Software

- Sports Related Computer Softwares

Internet

- Usage of Internet
- E-Mail
- Surfing

Introduction to Windows Operating System

- Components of GUI
- Components of a Window
- Interacting with Windows using Mouse
- Starting a Program in Windows
- Using My Computer
- Using Paint
- File Management in Windows
- Locating a File
- Searching a File
- Creating New Folder
- Renaming New Folder

Computer Networks

- LAN
- WAN

Using MS-Word & Excel

Creating Presentations by using Ms-PowerPoint

Recommended Books (Latest Editions of Following Books)

1. A Step by Step Guide to SPSS for Sport and Exercise Studies
Nikos Ntoumanis: 2001
2. Developing Football Players: Horst Wein.
3. Dr. A. Waheed Mughal Rules and Techniques of Games, 2009.
4. Malik Asif, *Rules of Games*, 2007, Iqra Publisher Nowshera, NWFP Pakistan.
5. Marshal Canendish, *Encyclopedia of Sports*
6. Organizing Successful Tournaments: John Byl: 2006

Paper – VI (b) Physical Education for Special person

Course Objectives

Total Marks: 70

The main objective of this course is to:

- Special education is one of the neglected areas in our educational system. This course will help the students to know the real problems of special people and how to tackle them.

Course Outcome

At the completion of this course the students will be able to:

- Students will get knowledge about the rehabilitation of special persons through physical activities, teaching methods useful to special people to adjust in the society.

Course contents

HISTORICAL BACKGROUND OF SPECIAL POPULATIONS

- a. Concepts of Specials Populations:
 - i. Dark Age
 - ii. Modern Age
- b. Concept for Special Populations in our Society

UNDERSTANDING OF SPECIAL POPULATION

- a. W.H.O.'s Definition and Classification of Special Population
- b. Basic Terms
- c. Public Law

TYPES OF SPECIAL POPULATION

- a. **Mental Retardation:**
 - i. Mild
 - ii. Moderate
 - iii. Severe

iv. Profound

b. Deaf and Defective:

i. Mild

ii. Moderate

iii. Severe

iv. Profound

c. Visually Impaired:

i. Blind

ii. Partially Sighted

iii. Partially Blind

iv. Low Vision

d. Physically Disabled:

i. Mild

ii. Moderate

iii. Severe

iv. Profound

TEACHING PROGRAMMES FOR SPECIAL POPULATION

a. Individual Programmes

b. Developmental Programmes

c. Remedial Programmes

d. Therapeutic Programmes

ADJUSTMENT OF SPECIAL POPULATION

a. Factors Affecting Adjustment

b. The Effects of Environment

c. Ways of Making Adjustment

- d. Adjustment of Special Populations in Society through Teachers and Parents

PHYSICAL ACTIVITIES FOR SPECIAL POPULATION

- a. Games and Sports activities for Special Population (Paralympics & Special Olympics)
- b. Fitness Exercises for Special Population
- c. Understanding the Nature of Motor Learning
- d. Principles of mechanics of movement for Special Population

PHYSICAL EDUCATION TEACHER FOR SPECIAL POPULATION

- a. Attributes of Physical Education Teacher
- b. Qualifications of Physical Education Teacher

Recommended Books (Latest Editions of Following Books)

1. Shekar, K.C. Adapted Physical Education, New Delhi: Khel Sahitya Kendra, 2005,
2. Jain, Anoop, Adapted Physical Education, New Delhi: Sports Publication, 2003.
3. Misra, Bhawana, Handbook of Teaching Disabled, New Delhi: Mohit, 2002.
4. Seamus Hegarty Mithu Alur, Education and Children with Special Needs, Sage Publications 2002 India.
5. Rao, V.K., Special Education, New Delhi: A.P.H., 2001.
6. Horrat, Michel, Developmental and adapted physical activity assessment, Human Kinetics Pub., London 2007.
7. Kelly, Luke, E., Adapted Physical Education national standards, 2nd ed. Human Kinetics Pub., London 2006.

Paper – VI (c) Role of Media in Sports

Course Objectives

Total Marks: 70

The main objective of this course is to:

- A Media is a powerful institution and is playing a very effective role in every walk of life. It is playing an important role in the propagation of sports and bringing the masses closer to the glamour of sports
- The course will meet the need to bring the students at home with the role of media in the mobilization of sports for the national cohesion and boosting the economy of the country through the sports as an industry

Course Outcome

At the completion of this course the students will be able to:

- This course will help to understand the present and future trends in sports and their implications upon the national development.
- Students will be able to understand the positive and negative effects of media in sports

Course contents

INTRODUCTION

- a. Types and Characteristics of Media
- b. Role of Media in Globalizations of Sports
- c. Mobilization through Media

SPORTS AND MEDIA

- a. The Professions of Sports Journalism
- b. Sports writing (coverage) and Journalism
- c. Sports Broadcasting
- d. Sports Photography
- e. Careers in Sports Media

MEDIA AND INTERNATIONAL COMPETITION GAMES (OLYMPIC GAMES)

- a. The Press Commission and Radio Commissions
- b. Facilities and Services at the games
- c. News and Entertainment

SPORTS ADVERTISEMENT

- a. Sports General
- b. Sports Periodicals
- c. Sports Magazines
- d. Banners
- e. Pamphlet

SPORTS AND JOURNALISM

- a. Introduction
- b. Images and Messages in Media Sports
- c. Government and Sports
- d. Media as a Source of Propagation in Sports
- e. Media and the Development of Sports.

Recommended Books (Latest Editions of Following Books)

1. Global Sport Sponsorship
Amis & Cornwell (Eds): 2005
2. Visual Perception & Action in Sport
A.M. Williams, K. Davids and J.G. Williams: 2005
3. Ethics, Money and Sport
Adrian Walsh and Richard Giulianotti: 2007
4. Fundamentals of Sport Marketing
Brenda G. Pitts & David K. Stotlar 2007
5. Case Studies in Sport Marketing
Brenda G. Pitts: 2007

Paper – VI (d) Trauma and Rehabilitation

Course Objectives

Total Marks: 70

The main objective of this course is to:

- This course will provide the students how to manage and rehabilitate injuries and treatment to manage in case of emergency.
- This course is designed to acquaint the students with the injuries its management and rehabilitation elaborating central nervous system, knee, Tennis Elbow ankle injuries and explaining safety rules and basic physiotherapist treatment to manage in case of emergency

Course Outcome

At the completion of this course the students will be able to:

- This course will help to understand about injuries and its treatment.
- Students will able to understand that what initial measures they can take in emergency situation

Course contents

INTRODUCTION

- b. Definition of Injury
- c. External & Internal causes of Injuries
- d. Psychological aspects of Injuries
- e. First Aid Box for coaches & sportsmen.

MUSCLE INJURIES

- a. Causes of muscle Injures
- b. Types of muscle Injuries
- c. Strain
- d. Compartment Syndrome
- e. Cruising Injures
- f. Muscle cramps
- g. Muscle soreness
- h. Complications of muscle injuries
- i. Treat of muscle injuries

SPRAIN

- a. Definition
- b. Grades
- c. Signs, Symptoms and Treatment

FRACTURES

- a. Definition
- b. Causes of fractures
- c. Types of fractures
- d. General principles of healing of fractures
- e. Treatment of fractures
- f. Injuries of back

TENDON INJURIES

- a. Definition
- b. Types of tendon injuries & their treatment.
- c. Different types of Bursitis its causes signs, Symptoms & Treatment.

OVER USE INJURIES

- a. Definition
- b. Causes
- c. Overuse injuries in sports men
- d. Supraspinatus Syndrome, Injury to meniscus, Tennis elbow, Golf Elbow, Patellofemoral, Groin injuries and Hamstring Injuries.

TREATMENT OF INJURIES

- a. Through Exercise
- b. Through Medication
- c. Hydro Therapy/Steam Therapy/Ice Therapy
- d. Pressure Therapy
- e. Laser Therapy

MASSAGE

- a. Definition of Massage
- b. Importance of Massage
- c. Methods of Massage

Recommended Books (Latest Editions of Following Books)

- 1. Sports Injury Management
Marcia K. Anderson, Susan J. Hall, Malissa Martin: 2005
- 2. Rehabilitation Techniques in Sports Medicine
William E. Prentice: 1987
- 3. ABC of Sports Medicine
Mark Harries, Greg Mclatchie, Clyde Williams, John King: 2000
- 4. Safety & First Aid Book
Jennifer Brown & Tony walker: 1996

Course Objectives

Total Marks: 70

The main objective of this course is to:

- The focus of the course is to equip the students with the latest rules and regulations laid down by I.A.A.F. (International Amateur Athletic Federation).
- This course will also be helpful in developing the skill of the students regarding the marking, and laying out the standard track and other circles and marking of the track

Course Outcome

At the completion of this course the students will be able to:

- The students will be able to conduct the track and field competitions at various levels as well as to perform the duties of technical officials.
- Through this course students are tuned to get the required information regarding marking of the tracks, judgment and officiating for various Athletic Events including: Running, Jumping, and Throwing Etc

Course contents

HISTORY OF ANCIENT OLYMPIC GAMES WITH SPECIAL REFERENCE TO TRACK & FIELD

- a. Brief History
- b. Rules of participation
- c. Programme of activities

MODERN OLYMPIC GAMES WITH SPECIAL REFERENCE TO TRACK & FIELD

LAYING OUT STANDARD TRACK

CONDUCT OF TRACK AND FIELD EVENTS

- a. Preparation of Track and Field competition program (Board, University, Province, National)
- b. Formation of committees for Track and Field competition

OFFICIALS AND THEIR DUTIES IN TRACK AND FIELD EVENTS

RULES AND TECHNIQUES OF TRACK EVENTS

RULES AND TECHNIQUES OF FIELD EVENTS**RULES OF CROSS COUNTRY****Recommended Books (Latest Editions of Following Books)**

1. Ch: Hashmat Ali, Olympics and Athletics, Lahore.
2. M. Shafiq History of the Olympic Games with special reference to Athletics, Faisalabad
3. Dr. Abdul Whaeed Mughal, Athletics Skill and Officiating, Islamabad.
4. John Heaton, Better Athletics field, Kay Ward Ltd. London, 1986.
5. How to organize an Athletics Meet. IAAF Hand Book
6. IAAF (2012). IAAF Hand Book: International Amateur Athletics Federation.

PRACTICAL (Part 2)

Curriculum and Courses for M.Sc. Sport Sciences & Physical Education (Annual system) Part I & II

M.Sc. Sport Sciences & Physical Education (Part-II)

Practical – I Athletics

Course Objectives

Total Marks: 30

The main objective of this course is to:

- The main purpose of this course is to enhance the knowledge of the students regarding Track & Field.
- The focus of the course is to equip the students with the latest rules and regulations laid down by I.A.A.F. (International Amateur Athletic Federation).
- This course will also be helpful in developing the skill of the students regarding the marking, and laying out the standard track and other circles and marking of the track
- The outline of this practical course is prepared with the purpose to provide basic technical knowledge to the students and familiar with modern approach for developing the skills in Athletic Track and Field events enabling them to developed courage, determination, speed, endurance and self-reliance

Course Outcome

At the completion of this course the students will be able to:

- The students will be able to conduct the track and field competitions at various levels as well as to perform the duties of technical officials.
- Through this course students are tuned to get the required information regarding Practical knowledge of marking the tracks, judgment and officiating for various Athletic Events including: Running, Jumping, and Throwing etc

Course contents

HIGH JUMP

➤ Skill Area

Approach run, Take off, Flight, Landing, Different styles of high jump

JAVELIN THROW

➤ Skill Area

Grip or Hold, Approach run, Throwing Technique (Start, Carry, Withdrawal, Transition, Pre-delivery stride, Delivery, Recovery), Optimum projection angle,

RELAY RACES

➤ Skill Area

Baton Exchange (Starting position, First leg, other legs, Methods of baton exchange, Take over/change over Zone), planning and strategy of team selection

MIDDLE/LONG DISTANCE RACES

➤ Skill Area

Running Technique,

COACHING OF ALL EVENTS

How to learn the skill, How to improve the skill by using scientific coaching methods (Health related fitness + Skill related fitness + Periodization of training + Nutrition + Energy System Involved)

OFFICIATING OF ALL EVENTS

Dimensions, Equipment used, Rules, Governing bodies, No. of Officials and Their roles, Different signs used during Refreeship/Judging/Umpiring

Recommended Books (Latest Editions of Following Books)

1. M.B. Davies, Physical Training, Games and Athletics in Schools, New Delhi, 2005.
2. Dr. M. L. Kamlesh, Athletic Personality: A Psychological Probe, New Delhi, 2005.
3. Ekta, Teaching and Coaching Athletics, New Delhi, 2004.
4. O.P. Sharma, Athletics Skills & Rules, New Delhi, 2003.
5. Guy Butler, Athletics & Training, New Delhi, 2003.

Practical – II Games

Course Objectives

Total Marks: 30

The main objective of this course is to:

- The fundamental objective of this course is to equip the students with the update knowledge regarding rules and regulations of various team Sports and knowledge of dimension and judgment and officiating for different games.
- The focus of the course is to develop skill in students about the different types of sports.
- This practical course has been design with the purpose to provide technical knowledge to students develop their skill in selected games.

Course Outcome

At the completion of this course the students will be able to:

- Understand about officiating of different games.
- Organizing of different types of tournaments.
- It will provide practical knowledge of Coaching
- It will also help the students to develop and polish their leadership qualities and sports-man spirit.

Course contents

BASKETBALL

- **Skill Area**

Shooting (Bank shot, lay-up-shot, Hook shot, jump shot, Free shot, Reverse lay-up-shot), Dribbling(Basic dribble, Crossover dribble, Short dribble), Passing(Bounce pass, Chest pass, Overhead pass, Hook pass), Rebounding, Pivoting

CRICKET

- **Skill Area**

Batting (front foot drive, back foot drive, volley, half volley, hook, pull, late cut, cover drive, leg glance, lofted drive, rolling drive, square cut, sweep, reverse sweep), Bowling (fast, medium pace, out swing, in swing, Yorker, good length, full toss, bumper or beamer, off spin, leg spin, left arm orthodox, leg cutter, off cutter, googly), Fielding (stopping, diving, catching, sliding), Wicket keeping(Stumping, gathering, diving)

LAWN TENNIS

- **Skill Area**

Serving, Hold/Grip on Racquet, Forehand, Backhand, Cross court, Drop shot, Lob, Rally, Volley, Top spin, Under spin

HOCKEY (Field)

- **Skill Area**

Passing, Stopping, Scooping, Free hit, Penalty corner, Penalty Stroke, Push-in/Hit-in, Dribbling, Flick

HANDBALL

- **Skill Area**

Grip, Dribbling, Passing, Dodging, Defense, Catching, Throwing, Shooting

COACHING OF ALL GAMES

How to learn the skill, How to improve the skill by using scientific coaching methods (Health related fitness + Skill related fitness + Periodization of training + Nutrition + Energy System Involved)

OFFICIATING OF ALL GAMES

Dimensions, Equipment used, Rules, Governing bodies, No. of Officials and Their roles, Different signs used during Refreeship/Judging/Umpiring

Recommended Books (Latest Editions of Following Books)

5. Dr. P. Modak, Rules and Principles of Sports & Games, New Delhi, India, 2005.
6. Dr. Anil Sharma, Sports Laws (with latest Rules and Management), New Delhi, India, 2004.
7. Dr. Anil Sharma, O.P. Sharma, The Illustrated Encyclopedia of Rules in Sports & Games, New Delhi, Sports Publication, 2004.
8. B.K. Chaturvedi, Rules and Skills of Games & Sports, New Delhi, Goodwill Publishing House, 2003.

Practical – III Small Area Games

Course Objectives

Total Marks: 20

The main objective of this course is to:

- The fundamental objective of this course is to equip the students with the practical knowledge regarding Small area games which are very important part of private schools physical activity especially which are not spacious
- The purpose of introducing this practical course on is to provide students the basic training to acquire knowledge that how we can engage students/people with limited space and get the purpose of fitness

Course Outcome

At the completion of this course the students will be able to:

- Understand about basics of Small area games.
- It will help that how we can go through physical activity without more space.
- It will provide practical knowledge of Coaching

Course contents

➤ Skill Area

General instructions, Body movements, Equipment skills, Games in circle formation, Games in line formation, Games in free formation, Team races

Indoor games, Football games, Cricket games, Hockey games, Sports day

➤ Coaching Area

How to learn the skill, How to improve the skill by using scientific coaching methods (Health related fitness + Skill related fitness + Periodization of training + Nutrition + Energy System Involved)

➤ Officiating

Dimensions, Equipment used, Rules, Governing bodies, No. of Officials and Their roles, Different signs used during Refreeship/Judging/Umpiring

Recommended Books (Latest Editions of Following Books)

1. Graham, G., Holt, S.A. & Parker, M. (1993). Children moving: a reflective approach to teaching physical education. Mountain View Calif.: Mayfield Pub. Co.
2. Kirchner, G. (1998). Physical education for elementary school children. Wm. C. Brown.
3. Landy, J.M. & Landy, M.J. (1993). Ready-to-use PE Activities for Grades K-2. Parker.
4. Landy, J.M. & Landy, M.J. (1993). Ready-to-use PE Activities for Grades 3-4. Parker.
5. Landy, J.M. & Landy, M.J. (1993). Ready-to-use PE Activities for Grades 5-6. Parker.
6. Landy, J.M. & Landy, M.J. (1993). Ready-to-use PE Activities for Grades 7-9. Parker.
7. Pangrazi, R.P (2004). Dynamic physical education for elementary school children. Pearson: Benjamin and Cumming.
8. Pangrazi, R.P. & Dauer, V.P. (1981). Movement in early childhood and primary education. Burgess.

Paper Pattern**M.Sc. Sport Sciences & Physical Education Part-I & II (Annual System) for Affiliated Colleges Academic Session 2014****M.Sc. Sport Sciences & Physical Education Part-1 (THEORY)**

Paper No.	Title of the Paper	Marks Distribution of Total Marks	Paper Pattern
I	Philosophy of Physical Education and Recreation	65	Subjective (essay type) five (5) out of Nine (9)
II	Movement Education (Basic Concepts)	65	Subjective (essay type) five (5) out of Nine (9)
III	Sports Medicine	65	Subjective (essay type) five (5) out of Nine (9)
IV	Psychology Sports	65	Subjective (essay type) five (5) out of Nine (9)
V	Science of Track & Field	65	Subjective (essay type) five (5) out of Nine (9)
VI	Theory of Game	65	Subjective (essay type) five (5) out of Nine (9)

M.Sc. Sport Sciences & Physical Education Part-1 (PRACTICAL)

Practical No.	Title of the Practical	Marks Distribution of Total Marks	Practical Pattern
I	Athletics	30	Practical (Skill) & Viva Voce (Coaching, Officiating and General Knowledge of particular sport with special reference to Pakistan)
II	Games	30	Practical (Skill) & Viva Voce (Coaching, Officiating and General Knowledge of particular sport with special reference to Pakistan)
III	Educational Gymnastics	25	Practical (Skill) & Viva Voce (Coaching, Officiating and General Knowledge of particular sport with special reference to Pakistan)
IV	Swimming	25	Practical (Skill) & Viva Voce (Coaching, Officiating and General Knowledge of particular sport with special reference to Pakistan)

M.Sc. Sport Sciences & Physical Education Part-2 (THEORY)

Paper No.	Title of the Paper	Marks Distribution of Total Marks	Paper Pattern
I	Methods of Research in Sports	70	Subjective (essay type) five (5) out of Nine (9)
II	Sports Biomechanics	70	Subjective (essay type) five (5) out of Nine (9)
III	Exercise Physiology	70	Subjective (essay type) five (5) out of Nine (9)
IV	Fitness and Wellness	70	Subjective (essay type) five (5) out of Nine (9)
V	Leadership in Sports	70	Subjective (essay type) five (5) out of Nine (9)
VI	*Optional Course / Research Thesis	70	At least 5% students will be enrolled in thesis. Oral Examination based on Research Thesis by an External Examiner (appointed by the Controller of Examinations, University of the Punjab, Lahore.)

***Optional Paper**

Students will have to appear in any one the following optional paper in case of selection of optional course instead of Research thesis

VI (a)	Theory of Games and Computer Application in Sports	70	Subjective (essay type) five (5) out of Nine (9)
VI (b)	Physical Education for Special Person	70	Subjective (essay type) five (5) out of Nine (9)
VI (c)	Role of media in sports	70	Subjective (essay type) five (5) out of Nine (9)
VI (d)	Trauma & Rehabilitation	70	Subjective (essay type) five (5) out of Nine (9)
VI (e)	Science of Track & Field	70	Subjective (essay type) five (5) out of Nine (9)

M.Sc. Sport Sciences & Physical Education Part-2 (PRACTICAL)

Practical No.	Title of the Practical	Marks Distribution of Total Marks	Practical Pattern
I	Athletics	30	Practical (Skill) & Viva Voce (Coaching, Officiating and General Knowledge of particular sport with special reference to Pakistan)
II	Games	30	Practical (Skill) & Viva Voce (Coaching, Officiating and General Knowledge of particular sport with special reference to Pakistan)
III	Small Area Games	20	Practical (Skill) & Viva Voce (Coaching, Officiating and General Knowledge of particular sport with special reference to Pakistan)