

**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**

**Revised Course Structure NEP-2020**

**UGC-F: Bachelor of Science in Physical Education, Health Education and Sports (Hons.)**

**B.Sc (P.E, H.E & S) (Hons.)**

Semester	Discipline Specific Course (DSC)	Discipline Specific Elective (DSE)	Generic Elective (GE)	Ability Enhancement Course (AEC)	Skill Enhancement Course (SEC)	Internship/Apprenticeship/Project (2)	Value Addition Course (VAC)	Total Credits
I	<p><b>DSC-1 (4): History and Foundation of Physical Education</b></p> <p><b>DSC-2 (4): Anatomy and Physiology</b></p> <p><b>DSC-3(4): Fundamentals of Game 1* : (Choose any one Game as per the list &amp; availability of the facilities) *</b></p>		<p><b>Choose one from a pool of courses</b></p> <p><b>BSc-PE-GE-1(4) 101: Fitness &amp; Wellness**</b></p> <p><b>BSc-PE-GE-1(4) 102: Gym Management</b></p>	<p><b>Choose one from a pool of AEC courses(2)</b></p> <p>English/ Hindi/ EVS</p>	<p><b>Choose one from a pool of courses (2)</b></p>		<p><b>Choose one from a pool of courses (2)</b></p>	<b>22 Credits</b>

<b>II.</b>	<b>DSC-4 (4): Health Education</b>  <b>DSC-5 (4): Exercise Physiology</b>  <b>-DSC - 6 (4): Fundamentals of Game 2* (Choose any one Game as per the list that hasn't been chosen in Sem I &amp; as per availability of the facilities) *</b>		<b>Choose one from a pool of courses</b>  <b>BSc-PE-GE-2(4)- 201: Stress Management</b>  <b>BSc-PE-GE-2(4)- 202: Professional Preparation and Career Avenues in Physical Education and Sports**</b>	<b>Choose one from a pool of AEC courses (2)</b> <b>English/ Hindi/ EVS</b>	<b>Choose one from a pool of courses (2)</b>		<b>Choose one from a pool of courses (2):</b>	<b>22 Credits</b>
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**Students on exit shall be awarded undergraduate Certificate (in the field of Multidisciplinary Study) after securing the requisite 44 Credits in Semesters I and II**

<b>III</b>	<b>DSC-7 (4): Kinesiology</b>  <b>DSC-8 (4): Exercise &amp; Sports Psychology</b>  <b>DSC-9 (4): Professional Preparation and Career Avenues in Physical Education and Sports</b>	<b>Choose one DSE from a pool of Courses</b> <b>OR</b> <b>Choose One GE (GE-3)</b>  <b>DSE-1 (4) 101- Optional Game 1* * (Select any one game (as per the list) * that hasn't been chosen before in Sem I &amp; II as DSC &amp; as per the facility available)</b>	<b>BSc-PE-GE-3(4) 301: Olympic Education</b>  <b>BSc-PE-GE-3(4) 302: Media in Physical Education and Sports</b>	<b>Choose one from a pool of AEC courses (2)</b>	<b>Choose one SEC or Internship/ Apprenticeship/ Project/ Community Outreach (2):</b>	<b>Choose one from a pool of courses (2)</b>	<b>22 Credits</b>
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		(i) Athletics (ii) Badminton (iii) Basketball (iv) Cricket (v) Football, (vi) Gymnastics (vii) Handball (viii) Hockey (ix) Judo (x) Kabaddi (xi) Kho-Kho (xii) Volleyball (xiii) Yoga (xiv) Swimming (xv) Wrestling (xvi) Table Tennis					
IV	<b>DSC-10 (4): Sports Sociology</b>  <b>DSC-11 (4): Sports Biomechanics</b>  <b>DSC-12 (4): Exercise Prescription for Fitness and Health</b>	Choose one DSE from a pool of Courses  OR  Choose One GE (GE-4)  <b>DSE-2(4)-201: Optional Game 2* Optional Game 2 (Select any one game (as per the list) * that hasn't been chosen before in Sem I, II &amp; III as DSC/DSE &amp; as per the facility available)</b> (i) Athletics (ii) Badminton	<b>BSc-PE-GE-4(4)-401: Yoga and Stress Management</b>  <b>BSc-PE-GE-4(4)-402: Introduction to Injury Prevention and Rehabilitation **</b>	Choose one from a pool of AEC courses(2)	Choose one SEC or Internship/ Apprenticeship/ Project/ Community Outreach (2):	Choose one from a pool of courses (2)	22 Credits

		(iii) Basketball (iv) Cricket (v) Football, (vi) Gymnastics (vii) Handball (viii) Hockey (ix) Judo (x) Kabaddi (xi) Kho-Kho (xii) Volleyball (xiii) Yoga (xiv) Swimming (xv) Wrestling (xvi) Table Tennis					
<b>Students on exit shall be awarded undergraduate Diploma (in the field of Multidisciplinary Study) after securing the requisite 88 Credits on completion of Semester IV</b>							
<b>V</b>	<b>DSC-13 (4): Organization &amp; Administration in Physical Education &amp; Sports</b>  <b>DSC -14 (4): Fundamentals of Sports Nutrition</b>  <b>DSC -15 (4): Athlete Care &amp; Rehabilitation</b>	<b>Choose one from the pool of courses-</b>  <b>DSE-3(4)-301: Game of Specialization Game - I *</b> (Select any one game from the games already studied from Sem I to IV as DSC/DSE Game)  <b>DSE-3(4)-302: Sports Journalism</b>  <b>DSE -3(4) -303: Sports Facility</b>	<b>Choose one from a pool of courses</b> <b>BSc-PE-GE- 5(4)-501: Lifestyle Management Through Physical Education</b>  <b>BSc-PE-GE- 5(4)- 502: History and Foundations of Physical Education**</b>		<b>Choose one SEC or Internship/ Apprenticeship/ Project/ Community Outreach (2):</b>		<b>22 Credits</b>

		Planning and Management						
VI	<b>DSC -16 (4): Fundamental of Sports Training</b>  <b>DSC -17 (4): Test, Measurement &amp; Evaluation in Sports</b>  <b>DSC -18(4): Fitness and Wellness Management</b>	<b>Choose one from a pool of Courses</b>  <b>DSE -4(4) -401: Game of Specialization – I* (Teaching and Coaching) (Game to continue from Sem V)</b>  <b>DSE -4(4) -402: Research Methods in Physical Education and Sports</b>  <b>DSE-4(4)-403: Sports Field Technology</b>	<b>Choose one from a pool of courses</b> <b>BSc-PE-GE-6(4)- 601: Obesity and Weight Management</b>  <b>BSc-PE-GE-6(4)-602: Fundamentals Of Game/ Sports**</b>  <b>(Choose any one Any one Game/sports as per the facility available in the college)</b>		<b>Choose one SEC or Internship/Apprenticeship/ Project/ Research/Community Outreach(2)</b>		<b>22 Credits</b>	
<b>Students on exit shall be awarded Bachelor of (in the field of Multidisciplinary Study) after securing the requisite 132 credits on Completion of Semester VI</b>								
VII	<b>DSC-19 (4): Strength and Conditioning</b>	<b>Choose three DSE (3X4) Courses</b> <b>OR</b> <b>Choose two DSE- (2X4) and one GE (4) Courses</b> <b>Or</b> <b>Choose one DSE (4) and two GE (2x4) Courses</b>	<b>BSc-PE-GE-7(4): 701-Sports for Leisure and Recreation</b>  <b>BSc-PE-GE-7(4): 702- Introduction to Sports Training**</b>  <b>BSc-PE-GE-7(4): 703- Management and Marketing in Physical Education</b>				<b>Dissertation on Major(4+2)</b> <b>OR</b> <b>Dissertation on Minor(4+2)</b> <b>OR</b> <b>Academic Project/ Entrepreneurship(4+2)</b>	<b>22 Credits</b>

		<p>(total=12)</p> <p><b>DSE 5 (4) 501 Game of Specialization II * (select any Game already studied in Sem I to IV as DSC or DSE, but other than studied in Sem V &amp; VI)</b></p> <p><b>DSE-6(4): 502 Applied Statistics in Sports</b></p> <p><b>DSE-7(4): 503 Research Methods in Physical Education and Sports</b></p> <p><b>DSE-8(4)-504: Ergogenic Aids and Doping in Sports</b></p>					)	
<b>VII</b>	<b>-DSC-20 (4): Sports Management</b>	<p><b>Choose three DSE (3X4) Courses OR Choose two DSE- (2X4) and one GE (4) Courses OR Choose one DSE (4) and two GE</b></p>	<p><b>BSc-PE-GE-8(4): 801- Strength and Conditioning</b></p> <p><b>BSc-PE-GE-8(4): 802- Adventure Sports</b></p> <p><b>BSc-PE-GE-8(4):</b></p>				<p><b>Dissertatio n on Major (6) <u>OR</u> Dissertatio n on Minor (7)  <u>OR</u> Academic</b></p>	<b>22 Credits</b>

		<b>(2x4) Courses (total=12)</b>  <b>DSE-9(4):601 Game of Specialization II* (Teaching and Coaching) (Game to continue from Sem. VII)</b>  <b>DSE-10(4): 602- Research Ethics in Physical Education and Sports</b>  <b>DSE-11(4): 603- Adapted Physical education</b>  <b>DSE-12(4) 604- Adventure Sports</b>	<b>803- Physical Education for Inclusiveness</b>				<b>Project Entrepreneurship (8)</b>	
								<b>TOTAL CREDITS =176</b>

**\*LIST OF GAMES (Choose as per the facility available)**

**(i) Athletics, (ii) Badminton, (iii) Basketball, (iv) Cricket, (v) Football, (vi) Gymnastic, (vii) Handball, (viii) Hockey, (ix) Judo, (x) Kabaddi, (xi) Kho-Kho, (xii) Volleyball, (xiii) Yoga, (xiv) Swimming, (xv) Wrestling (xvi) Table Tennis**

**\*\* GE (Compulsory to opt for Minor in Physical Education)**

**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**  
**UGCF: B.SC. PHYSICAL EDUCATION, HEALTH EDUCATION AND SPORTS (HONS.)**  
**NEP-2020**

**B.Sc (PE, HE & S) Hons.**

<b>SEMESTER</b>	<b>COURSE</b>	<b>CONTENT /CREDITS *</b>
<b>I</b>	<b>Discipline Specific Course (DSC)</b>	<b>DSC-1 (4): History and Foundation of Physical Education</b>  <b>DSC-2 (4): Anatomy and Physiology</b>  <b>DSC-3(4): Fundamentals of Game 1**</b> <b>((Choose any one Game as per the list &amp; availability of the facilities) *</b>
	<b>Discipline Specific Elective (DSE)</b>	<b>NONE</b>
	<b>Generic Elective (GE)</b>	<b>Choose one from a pool of courses (of other Departments) (4)</b>
	<b>Ability Enhancement Course (AEC)</b>	<b>Choose one from a pool of AEC courses(2)</b> <b>English/ Hindi/ EVS</b>
	<b>Skill Enhancement Course (SEC)</b>	<b>Choose one from a pool of courses (2)</b>
	<b>Internship/Apprenticeship/Project (2)</b>	<b>NONE</b>
	<b>Value Addition Course (VAC)</b>	<b>Choose one from a pool of courses (2)</b>
		<b>Total Credits= 22</b>

\* (FIGURE IN BRACKETS DENOTE CREDITS)

\*\*LIST OF GAMES (Choose as per the facility available)

(i) Athletics, (ii) Badminton, (iii) Basketball, (iv) Cricket, (v) Football, (vi) Gymnastic, (vii) Handball, (viii) Hockey, (ix) Judo, (x) Kabaddi, (xi) Kho-Kho, (xii) Volleyball, (xiii) Yoga, (xiv) Swimming, (xv) Wrestling (xvi) Table Tennis



# **SEMESTER I**

## SEMESTER I

### BSc-PE-DSC-1 (4): HISTORY AND FOUNDATION OF PHYSICAL EDUCATION

Course Title & Code	Credits	Credit distribution of the Course			Eligibility Criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSC-1 (4): HISTORY AND FOUNDATION OF PHYSICAL EDUCATION	4	3	1	0	Pass in XII	NIL

#### Learning Objectives

To provide the knowledge of historical development of Physical Education & Sports and to familiarize the students with foundations of Physical Education & Sports in reference to biological, psychological, sociological and other foundations

**Learning outcomes** At the end of the course student will be able to::

- Acquire the knowledge of history & foundations of Physical Education and understand the purpose & development of physical education & sports.
- Develop the understanding and knowledge regarding meaning, definitions, scope, importance of physical education in society, Aim and Objectives of Physical Education and their relation with education.
- Learn Biological, Psychological and Sociological Foundation of physical education.
- Learn to assess the body types by Heath & Carter method.
- Develop the understanding and knowledge of meaning& concepts of movement, qualities of the movements, fundamentals movements, Need and importance of movement in educational programs, Concept and role of wellness movement.
- Knowledge of the Modern and Ancient Historical development of Olympic movement and Olympic Games.

## **THEORY SYLLABUS (45 HOURS)**

### **UNIT-I**

**(10 hours)**

- (i) Meaning, Definitions, Scope, and importance of physical education in society.
- (ii) Aim and Objectives of Physical Education and their relation with education.

### **UNIT-II**

**(15 hours)**

- (i) Foundations of Physical Education
- (a) Biological foundation–Introduction, Growth and Development, and Body types.
- (b) Psychological Foundation–Introduction, Learning process, and theories.
- (c) Sociological Foundation–Introduction, Socialization process.

### **UNIT-III**

**(10 hours)**

- (i) Meaning & concepts of movement, qualities of the movements, fundamentals of movements, Need and importance of movement in educational programs
- (ii) Concept and role of the wellness movement.

### **UNIT-IV**

**(10 hours)**

- (i) Modern and Ancient Historical perspectives of Physical Education: Greece, Rome and India.
- (ii) Olympic movement and Olympic Games (Ancient and Modern)
- (iii) National Sports Awards and Honors.

## **SUGGESTED READINGS:**

1. Gupta, Rakesh (2013), Health and Physical Education, Pinnacle India Education Publisher, New Delhi.
2. Lumpkin, A. (2007). Introduction to Physical Education, Exercise Science and Sports Studies, McGraw Hill. New York, USA.
3. Uppal AK & Gautam GP (2008). Health and Physical Education. Friends Publication. New Delhi.
4. Vanaik A. & Tyagi, Sarita (2018). Encyclopedia of Olympic Movement, Friends Publication. New Delhi
5. Vanaik A. (2005) Sharirik Shiksha Maulik Adhar, Friends Publication. New Delhi
6. Wuest DA and Bucher CA (2003). Foundations of Physical Education Exercise Science and Sports. McGraw Hill Companies, Inc., New York, USA.
7. Zeigler EF (2007). History and Status of Physical Education and Educational Sports. Sports Education. New Delhi.
8. Singh, Ajmer et.al (2012), Essentials of Physical Education, Kalyani publishers, New Delhi.
9. Kamlesh, M.L (2013), Foundations of Physical Education, Sports

publication, New Delhi.

10. Kanwar, Chand Ramesh (2010), Principles and History of Physical Education, Amit Brothers publication.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**SEMESTER I**  
**BSc-PE-DSC-2 (4): ANATOMY AND PHYSIOLOGY**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSC-2 (4): ANATOMY AND PHYSIOLOGY</b>	4	3	0	1	<b>Pass in XII</b>	<b>NIL</b>

**Learning Objectives**

To provide students with the basic knowledge of anatomical structures & functions of human body.

**Learning Outcomes** At the end of the course student will be able to::

1. Acquire the basic knowledge of the anatomy of the human body.
2. Develop understanding about the functions of each system of the body.
3. Acquire knowledge and skill will help to create a strong foundation to engage human subject of all ages, sex, abilities.

**THEORY SYLLABUS (45 HOURS)**

**UNIT-I (10 hrs.)**

- Definition of Anatomy & Physiology, Cell- microscopic structure & functions of its organelle.
- Tissue-classification & functions.
- Organs, systems of the body,
- Bone-classification and structure, joints classification,
- Structure of synovial joints. Movements at various joints.

**UNIT-II (15 hrs.)**

- Muscular System-Classification, Structure, functions & properties of Skeletal Muscle, Smooth Muscle & Cardiac Muscle.
- Types of muscular contractions, Name of various muscles acting on various joints.
- Cardio-vascular system structure of heart, cardiac cycle, blood pressure, cardiac

output, composition & functions of blood

### **UNIT-III (10 hrs.)**

- Respiratory system- structure and function, second wind, oxygen debt.
- Digestive system-structure & function, balanced diet, an overview of Carbohydrate, Protein and Lipid metabolism
- Maintenance of body temperature.

### **UNIT-IV (10hrs.)**

- Nervous system -structure of brain, spinal cord, Autonomic nervous system, reflex action.
- Endocrine system of various endocrine glands, Structure & function of the human eye and ear.
- Excretory system-structure&function, including structure&function of skin.
- Reproductive system-structure&function of male&female Reproductive system.

### **Practical Syllabus:-(30 HOURS)**

1. Counting of pulse rate
2. Study of various bones of the human body
3. Study of different body systems with the help of models
4. Study of various movements of the joints.

### **SUGGESTED READINGS:**

1. Jain AK (2002). Anatomy & Physiology for Nurses. Arya Publishers, Delhi.
2. Moried EN(2007).Essential of Human Anatomy & Physiology.Ed.8<sup>th</sup>Dorling Kindersley, India.
3. Prives Mand and Others(2004).Human Anatomy Vol.I&II Paragon, Delhi.
4. Seeley & Others(2008).Anatomy & Physiology. McGrawHill, Boston.
5. Tortora (2017) Principles of Anatomy & Physiology, New York: John Willy & Sons.
6. William CS (2000).Essentials of Human Anatomy & Physiology, Benjamin
7. Dutta, Tapan (2015), Anatomy and physiology for Two years B.P.Ed. Programme Semester -I, Siddhart publication, Nagpur.
8. Kanwar, Chand Kanwar (2011), Amit brother's publications.
9. Routhan, Tarun (2018), Essentials of Exercise Physiology, Sports Publication, Sports publication.
10. Wilson and Ross (2006), Anatomy and Physiology in Health and illness, Churchill Livingstone.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

## SEMESTER 1

### BSc-PE-DSC-3(4): FUNDAMENTALS OF GAME 1

(Choose any one Game as per the list & availability of the facilities) \*

\*(i) Athletics(ii) Badminton(iii) Basketball,(iv) Cricket (v) Football(vi) Gymnastic(vii) Handball(viii) Hockey

(ix) Judo(x) Kabaddi (xi) Kho-Kho (xii) Volleyball (xiii) Yoga (xiv) Swimming (xv) Wrestling (xvi) Table Tennis

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/P practice		
BSc-PE-DSC-3(4): FUNDAMENTALS OF GAME 1	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcome:-**The student will attain knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice.

#### THEORY SYLLABUS (30 Hours)

##### UNIT-I

(08 Hours)

- Historical Development and Modern Trends in the game (National and International Level)
- Organizational Structure (State, National, and International Level)
- Introduction to Playfield/arena of the game/ athletic Track& field events/ Yogic arena

##### UNIT-II

(08 Hours)

- Rules and their interpretation of the chosen sports/ Track & field events/ Yogic Asanas
- Basis of Warming up and cooling down and its effect
- Role of coach in preparing players/Teams

##### UNIT-III

(07 Hours)

- Basic skills and techniques of the chosen Game/ Yogic Asanas/Athletic Events (short,middleandlong-distanceraces,hurdlesraces,jumpingevents-longjump & High Jump, throwing events-shot-put, discuss & Javelin)
- Developmental Drills / **Preparatory Exercises** to improve skills of the Game/event/Asanas

##### UNIT-IV

(07 Hours)

- Introduction to Fitness components related to sports / athletic events/yoga

- Role of Fitness & skill related fitness components of the chosen game in improving performance

### **PRACTICAL SYLLABUS (60 Hours)**

1. Learning and demonstrating various skills/techniques of the chosen Game
2. Drills to improve Fundamental skills of the chosen game (for athletics/ Gymnastics any three events)
3. Marking of Playfield/ arena of chosen game (for athletics / Gymnastics any three events)

### **SUGGESTED READINGS:**

- Gothi E(2004).Teaching & Coaching Athletics .Sport Pub, New Delhi.
- Gupta R.(2004).Layout & Marking of Track & Field. Friends Publications. India. New Delhi.
- Handbook-RulesandRegulation.InternationalAthleticFederation(2010).
- HerbAmato,DAATCetal(2002).Practical Exam Preparation Guide of Clinical Skills of Athletic Training. Slack Incorporated.1<sup>st</sup>ed.,USA.
- Kumar,Pardeep.(2008).HistoricalDevelopmentofTrack&Field.FriendsPublication.NewDelhi
- Maughan,R. and Gluson, M.(2004).The Biomechanical Basics of Athletic Performance. Oxford University Press,U.K.
- Renwick GR(2001).Play Better Athletics. Sports Pub, Delhi.
- Singh, Hardayal.(2019).Science of Sports Training.DVS Publication, N.Delhi.
- VanaikA.(2017).OfficiatingandCoaching,FriendsPublication.NewDelhi.
- Elliott R., (2011). Runners on Running: The Best Nonfiction of Distance Running, Human Kinetics, UNITED States of America.
- Galloway J., (2011). Cross Country Running, Mayer &Mayer Sport, UNITED Kingdom.
- Galloway J., (2012). 100 Reasons to Run, Mayer &Mayer Sport, United Kingdom.
- Thani L., (2018). Skills & tactics field athletics, sports publication, New Delhi
- Singh, Hardayal.(2019).Science of Sports Training. D V S Publication, N.Delhi.
- Vanaik A.(2017).Officiating and Coaching, Friends Publication .NewDelhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**



# **SEMESTER II**

**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**  
**UGCF: B.SC. PHYSICAL EDUCATION, HEALTH EDUCATION AND SPORTS (HONS.) NEP-2020**

**B.Sc (PE,HE & S) Hons.**

SEMESTER	COURSE	CONTENT /CREDITS *
<b>II</b>	<b>Discipline Specific Course (DSC)</b>	<b>DSC-4 (4): Health Education</b> <b>DSC-5 (4): Exercise Physiology</b> <b>-DSC - 6 (4): Fundamentals of Game 2** (Choose any one Game as per the list that hasn't been chosen in Sem I &amp; as per availability of the facilities)</b>
	<b>Discipline Specific Elective (DSE)</b>	<b>NONE</b>
	<b>Generic Elective (GE)</b>	<b>Choose one from a pool of courses (of other Departments) (4)</b>
	<b>Ability Enhancement Course (AEC)</b>	<b>Choose one from a pool of AEC courses (2)</b> <b>English/ Hindi/ EVS</b>
	<b>Skill Enhancement Course (SEC)</b>	<b>Choose one from a pool of courses (2)</b>
	<b>Internship/Apprenticeship/Project (2)</b>	<b>NONE</b>
	<b>Value Addition Course (VAC)</b>	<b>Choose one from a pool of courses (2)</b>
		<b>Total Credits= 22</b>

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**(FIGURE IN BRACKETS DENOTE CREDITS)**

**\*\*LIST OF GAMES (Choose as per the facility available)**

**(i) Athletics, (ii) Badminton, (iii) Basketball, (iv) Cricket, (v) Football, (vi) Gymnastic, (vii) Handball, (viii) Hockey, (ix) Judo, (x) Kabaddi, (xi) Kho-Kho, (xii) Volleyball, (xiii) Yoga, (xiv) Swimming, (xv) Wrestling (xvi) Table Tennis**

## **SEMESTER-II**

### **DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**

#### **B.SC.(HONS.) IN PHYSICAL EDUCATION, HEALTH EDUCATION AND SPORTS**

#### **BSC-PE-DSC-4(4): HEALTH EDUCATION**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/P ractice		
BSc-PE-DSC-4(4): HEALTH EDUCATION	4	3	1	0	Class XII pass	Nil

**Learning Objective:-**The learner will acquire knowledge and understanding with applications and skills (field and laboratory) in health education in real-life situations.

**Learning Outcome:-** At the end of the course students will be able to:

- Understand the concepts of health and related terminologies.
- Acquire knowledge about communicable and non-communicable diseases.
- Differentiate between communicable and non-communicable diseases.
- Understand the effect of substance abuse and its management
- Acquired knowledge of first aid, CPR, and first aid for, bleeding, fractures, sprain and strain (PRICER), drowning, snakebite, poisoning, heat stroke, and heat exhaustion.
- Acquire knowledge about international health agencies- WHO, UNICEF, RED CROSS- their constitution and role in promoting health.

#### **THEORY SYLLABUS (45 HOURS)**

##### **UNIT I (11 HOURS)**

- (i) Health-Meaning, Dimensions of Health And Their Interrelationships, The Importance of Health For Individual, Family, CommUNITY, And Nation; Factors Influencing Health, The Spectrum Of Health
- (ii) Health Education- Meaning, Scope, Aims And Objectives, Principles, Methods And Media Used In Health Education.
- (iii) Personal Hygiene, Food Hygiene, Environmental Hygiene Meaning, Need And Importance; Associated Practices Related To Maintenance And Promotion Of Health

##### **UNIT -II (11 HOURS)**

- i. Communicable And Non – Communicable Diseases-Distinction Between Communicable And Non-Communicable Diseases.

- ii. Communicable Diseases-Definition, Mode Of Spread And Prevention,
- iii. Non-Communicable Diseases--Meaning, Causes, And Preventive Measures

### **UNIT-III (11 HOURS)**

- (i) Contemporary Health Problems of College Youth
- (ii) Substance Abuse Management-Alcohol, Drugs, Tobacco (Chewing, Sniffing, Smoking)-Their Harmful Effects
- (iii) Population Education Importance Of Small Families, Methods Of Controlling Conception
- (iv) Care Of The Infant, The Importance Of Breastfeeding, Immunization, Oral Rehydration Therapy (ORS)

### **UNIT-IV (12 HOURS)**

- (i) Definition Of First Aid, DRABCH Of First Aid, CPR, First Aid For, Hemorrhage, Fractures, Sprain And Strain (PRICER), Drowning, Snakebite, Poisoning, Heat Stroke, And Heat Exhaustion.
- (ii) International Health Agencies- WHO, UNICEF, Red Cross- Their Constitution And Role In Promoting Health.

### **SUGGESTED READINGS-**

1. Anspaugh DJ Ezell Gand Goodman KN (2006). Teaching Today's Health. Mosby Publishers.Chicago.USA.
2. Balayan D (2007).Swasthya Shiksha Evam Prathmik Chikitsa. Khel Sahitya.Delhi.
3. Chopra D and D Simon (2001). Grow Younger, Live Longer: 10 Steps to Reverse Aging. Three Rivers Press. New York. USA.
4. Dewan A P (1996).School Health Manual. Nature Cure and Yoga Health Centre. New Delhi.
5. Dixit Suresh(2006). Swasthya Shiksha. Sports Publication. Delhi.
6. Donatelle R J (2005).Health the Basics. Sixth Edition.Oregon State University.
7. FloydPASEMimmsandCYeilding(2003).PersonalHealth:Perspectivesand Lifestyles.ThomsonWadsWorth.Belmont.California.USA.
8. HalesD(2005).AnInvitationtoHealth.Thomson-Wadsworth,Belmont.California.USA.
9. Park K (2017).Park's Text Book of Preventive & Social Medicine. Banarsi Das Bhanot & Company. Delhi.
10. Snehlata(2006).Shareer,VigyanEvamSwasthyaRaksha.DiscoveryPub.Houses.New Delhi.
11. Uppal A K & Gautam G P (2008). Health & Physical Education. Friends Publication. New Delhi.

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## SEMESTER II

### BSc-PE-DSC-5(4): EXERCISE PHYSIOLOGY

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSC-5(4): EXERCISE PHYSIOLOGY	4	3	0	1	Class XII pass	NIL

**Learning Objective:-**The learner will acquire knowledge and understanding with applications and skills (field and laboratory) in exercise physiology.

**Learning Outcomes:** By the end of the course, students will be able to:

1. Understand the concepts of Exercise Physiology and its significance in Physical Education and Sports.
2. Acquire knowledge about skeletal muscle's gross and microscopic structure, fiber types, acute response, chronic adaptation, and the muscular system.
3. Gain an overview of energy metabolism, including fuels for exercise, exercise duration, and fuel utilization.
4. Differentiate between aerobic and anaerobic systems.
5. Understand cardiovascular function during exercise and training.
6. Assess the various physiological parameters during rest and exercise.

#### **THEORY SYLLABUS (45 Hours)**

##### **UNIT 1: Fundamentals and Neuromuscular Function (10 HOURS)**

- i.Exercise Physiology: Definition, Concept & its Significance in the Field of Physical Education & Sports
- ii.Meaning of Acute Physiological Response and Chronic Physiological Adaptations
- iii.Skeletal Muscles: Gross & Microscopic Structure of Skeletal Muscle, Sliding Filament Theory, Muscle fiber types, Acute Response & Chronic Adaptation and the muscular system.

##### **UNIT 2: Energy & Hormonal Regulation (10 HOURS)**

- i.Overview of Energy Metabolism-Fuels of exercise, Exercise Duration and Fuel utilization
- ii.Energy Systems- Aerobic & Anaerobic Systems
- iii.Endocrine Glands: Hormones secreted, actions, target organ/system, and Exercise and Training Response.

### **UNIT3: Cardio-respiratory System and Training Adaptations (16 HOURS)**

- i. Cardiovascular Function during Exercise and Training: Structure & Function of the Heart, Cardiovascular Response to Exercise and Chronic Adaptations, Athlete's heart.
- ii. Respiratory Function during Exercise and Training: Respiratory Parameters, Oxygen Debt, Second Wind, Acute Response and Chronic Adaptation.

### **UNIT4: Exercise and the Environment (09 HOURS)**

- i. High Altitude – Physiological Response, Exercise responses, and training adaptations.
- ii. Hot and Cold Environment: Physiological Responses, Exercise Response, Heat & Cold Disorders.

### **PRACTICAL SYLLABUS (30 HOURS)**

1. Assessment Of Resting Heart Rate
2. Assessment Of Resting Blood Pressure
3. To Measure Vital Capacity Using Spiro-Meter
4. Assessment Of Heart Rate After Exercise
5. Administering The Harvard Step Test

### **SUGGESTED READINGS:**

1. Camaione, David N.(1993).Fitness Management. WCB Brown & Benchmark.
2. Jakson,AllenWandJamesR.Morrow(1999)PhysicalActivityforHealth&fitness.HumanKineticsPublication.
3. Katch F. Land McArdle W.D(2010) Nutrition, Weight Control and Exercise. Philadelphia, Lea & Febiger.
4. Tiwari,Sandhya,(1999).ExercisePhysiology.SportsPublications,NewDelhi.
5. WilmoreJack.HandDavidL.Costill(1994).PhysiologyofSportandExercise. Human Kinetics.
6. G.GregoryHalf.(2012).LaboratoryManualforExercisePhysiology.USA.HumanKinetics.
7. W.LarryKenney,JackH.Wilmore,DevidL.Costil.(2015).PhysiologyofSportsandExercise,SecondEdition.USA.HumanKinetics.
8. Christophe. Hausswirth, Inigo Mujika.(2013).Recovery for Performance in Sports, USA, Human Kinetics.
9. InigoMujika.(2009).TaperingandPeakingForOptimalPerformance.USA.HumanKinetics.
10. PerOlf.Astrand,Kaare.Rodahl.(2003).TextBookofWorkPhysiology:Physiological Basis of Exercise. Fourth Edition. USA. Human Kinetics.
11. Jonathan K.Ehrman, Dennis Kerrigan,et.al.(2017). Advanced Exercise Physiology: Essential Concepts and Applications.USA. Human Kinetics.

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## SEMESTER II

### BSc-PE-DSC-6 (4): FUNDAMENTALS OF GAME 2

(Choose any one Game as per the list that hasn't been chosen in Sem I & as per availability of the facilities) \*

\*(i) Athletics(ii) Badminton(iii) Basketball,(iv) Cricket (v) Football(vi) Gymnastic(vii) Handball(viii) Hockey  
(ix) Judo(x) Kabaddi (xi) Kho-Kho (xii) Volleyball (xiii) Yoga (xiv) Swimming (xv) Wrestling (xvi) Table Tennis

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/P practice		
BSc-PE-DSC-6(4): FUNDAMENTALS OF GAME 2	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcome:-**The student will attain knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice.

#### THEORY SYLLABUS (30 Hours)

##### UNIT-I

(08 Hours)

- Historical Development and Modern Trends in the game (National and International Level)
- Organizational Structure (State, National, and International Level)
- Introduction to Playfield/arena of the game/ athletic Track& field events/ Yogic arena

##### UNIT-II

(08 Hours)

- Rules and their interpretation of the chosen sports/ Track & field events/ Yogic Asanas
- Basis of Warming up and cooling down and its effect
- Role of coach in preparing players/Teams

##### UNIT-III

(07 Hours)

- Basic skills and techniques of the chosen Game/ Yogic Asanas/Athletic Events (short,middleandlong-distanceraces,hurdlesraces,jumpingevents-longjump & High Jump, throwing events-shot-put, discuss & Javelin)
- Developmental Drills / Preparatory Exercises to improve skills of the Game/event/Asanas

##### UNIT-IV

(07 Hours)

- Introduction to Fitness components related to sports / athletic events/yoga
- Role of Fitness & skill related fitness components of the chosen game in improving performance

#### PRACTICAL SYLLABUS (60 Hours)

4. Learning and demonstrating various skills/techniques of the chosen Game

5. Drills to improve Fundamental skills of the chosen game (for athletics/ Gymnastics any three events)
6. Marking of Playfield/ arena of chosen game (for athletics/ Gymnastics any three events)

**SUGGESTED READINGS:**

- Gothi E(2004).Teaching & Coaching Athletics .Sport Pub, New Delhi.
- Gupta R.(2004).Layout & Marking of Track & Field. Friends Publications. India. New Delhi.
- Handbook-RulesandRegulation.InternationalAthleticFederation(2010).
- HerbAmato, DAAT Cetal (2002).Practical Exam Preparation Guide of Clinical Skills of Athletic Training. Slack Incorporated.1<sup>st</sup>ed.,USA.
- Kumar,Pardeep.(2008).HistoricalDevelopmentofTrack&Field.FriendsPublication.NewDelhi
- Maughan,R. and Gluson, M.(2004).The Biomechanical Basics of Athletic Performance. Oxford University Press,U.K.
- Renwick GR(2001).Play Better Athletics. Sports Pub, Delhi.
- Singh, Hardayal.(2019).Science of Sports Training.DVS Publication, N.Delhi.
- VanaikA.(2017).OfficiatingandCoaching,FriendsPublication.NewDelhi.
- Elliott R., (2011). Runners on Running: The Best Nonfiction of Distance Running, Human Kinetics, United States of America.
- Galloway J., (2011). Cross Country Running, Mayer &Mayer Sport, United Kingdom.
- Galloway J., (2012). 100 Reasons to Run, Mayer &Mayer Sport, United Kingdom.
- Thani L., (2018). Skills & tactics field athletics, sports publication, New Delhi
- Singh, Hardayal.(2019).Science of Sports Training. D V S Publication, N.Delhi.
- Vanaik A.(2017).Officiating and Coaching, Friends Publication. New Delhi

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**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**  
**UGCF: B.SC. PHYSICAL EDUCATION, HEALTH EDUCATION AND SPORTS**  
**(HONS.) NEP-2020**

**B.Sc (PE, HE & S) Hons.**

SEMESTER	COURSE	CONTENT /CREDITS *
III	Discipline Specific Course (DSC)	DSC-7 (4): Kinesiology  DSC-8 (4): Exercise & Sports Psychology  DSC-9 (4): Professional Preparation and Career Avenues in Physical Education and Sports
	Discipline Specific Elective (DSE)  OR  Generic Elective (GE)	Choose one DSE from a pool of Courses,  DSE-1 (4) 101-Optional Game 1** (Select any one game(as per the list) ** that hasn't been chosen before in Sem I & II as DSC & as per the facility available)  OR  Choose one GE -3 from a pool of courses (of other Departments) (4)
	Ability Enhancement Course (AEC)	Choose one from a pool of AEC courses (2)
	Skill Enhancement Course (SEC)	Choose one SEC or Internship/ Apprenticeship/ Project/ Community Outreach (2)
	Internship/Apprenticeship/Project (2)	
	Value Addition Course (VAC)	Choose one from a pool of courses (2)
		<b>Total Credits= 22</b>

\* (FIGURE IN BRACKETS DENOTE CREDITS)

\*\*LIST OF GAMES (Choose as per the facility available)

(i) Athletics, (ii) Badminton,(iii) Basketball, (iv) Cricket ,(v) Football, (vi) Gymnastic, (vii) Handball, (viii) Hockey, (ix) Judo, (x) Kabaddi, (xi) Kho-Kho , (xii) Volleyball, (xiii) Yoga, (xiv) Swimming. (xv) Wrestling (xvi) Table Tennis

# **SEMESTER III**

**SEMESTER III**  
**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**  
**UNIVERSITY OF DELHI**

**B.Sc. (Hons.) (Physical Education, Health Education and Sports)**

**SEMESTER- III**

**B.SC.-PE-DSC-7(4) KINESIOLOGY**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>B.SC.-PE-DSC-7(4) KINESIOLOGY</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:** To impart the knowledge, practices, Applications, and analysis related to Kinesiology.

**Learning Outcome:**

1. Understand the concepts, applications, aims, objectives, and importance of kinesiology in physical education and sports, including fundamental movements and muscle classification.
2. Develop skills in the location and action of muscles at various joints (upper extremity, neck and trunk, lower extremity) and analyze muscular actions in fundamental movements.
3. Gain knowledge and application of the structure of motor actions, including cyclic and acyclic motor actions and movement combinations.
4. Acquire knowledge and apply qualities and physiological principles of movements such as movement rhythm, coupling, flow, precision, and amplitude.
5. Analyze the muscular aspects of fundamental sports skills and apply innovative applications.

## **THEORY SYLLABUS (45 HOURS)**

### **UNIT-I (11 HOURS)**

1. Meaning, Aim & Objectives, Importance Of Kinesiology For Physical Education And Sports
2. Fundamental Concepts: Centre of Gravity, Line Of Gravity, Axis And Planes of Motion, Fundamental Starting Positions, Terminology of Fundamental Movements, And Classification of Muscles

### **UNIT-II (11 HOURS)**

1. Location & Action Of Muscles At Various Joints:-
  - a) Upper Extremity–Shoulder Girdle, Shoulder Joints, Elbow Joint
  - b) Neck, Trunk (Lumbo-Thoracic Region)
  - c) Lower Extremity–Hip Joint, Knee Joint, Ankle Joint
2. Muscular Analysis of Fundamental Movements:-Walking, Running, Jumping, Throwing, Catching, Pulling, Pushing, Striking, Hanging

### **UNIT-III (12 HOURS)**

1. Structure of Motor Actions: - Structure Of Cyclic And Acyclic Motor Action And Movement Combination,
2. Functional Relationship Of Different Phases Of Motor Action.

### **UNIT-IV (11 HOURS)**

1. Qualities & Physiological principles of movements:-  
Movement rhythm, Movement coupling movement flow, Precision And Amplitude.

## **PRACTICAL SYLLABUS (30 HOURS)**

1. Demonstration Of Planes & Axes Of A Given Movement.
2. Determination Of The Location Of Muscles At Various Joints:
  - i. Shoulder Girdle
  - ii. Shoulder joints
  - iii. Elbow joint
  - iv. Hip joint
  - v. Knee joint
  - vi. Ankle joint
3. Muscular analysis of the techniques of the game of your specialization
4. Measurement Demonstration of qualities of movement.

**SUGGESTED READINGS: -**

- Bartlett,R.(2007).IntroductiontoSportsBiomechanics.RoutledgePublishers,USA.
- Blazeovich,A.(2007). Sports Biomechanics .A&C Black Publishers, USA.
- McGinnis,P.(2004).BiomechanicsofSports&Exercise.HumanKinetics,USA.
- Shaw,D.(2014).MechanicalBasisofBiomechanics.SportsPublication:NewDelhi
- Rai,R.(2003).Biomechanics Mechanics Aspects of Human Motion. A grim Publication: Moha
- Shaw,D(2018).Pedagogic Kinesiology. Sports Publication: Delhi
- Robertson,D.G.E.Caldwell,G.E.,Hamil,J.KamenG.,&Whittlesey,S.N.(2014).Research Methods in Biomechanics.(2<sup>nd</sup>ed.)EdwardsBrothersMalloy:USA
- Hoffman.J ( 2013), Introduction to Kinesiology, Human kinetics.
- Shaw Dhananjoy (2017), Pedagogic Kinesiology, Sports Publication.
- Ziegler.F Earle (2007), Physical education and Kinesiology, Sports educational technologies.

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### SEMESTER III

#### BSc-PE-DSC-8(4) EXERCISE & SPORTS PSYCHOLOGY

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSC - 8(4): EXERCISE & SPORTS PSYCHOLOG Y	4	3	0	1	Class XII pass	Nil

**Learning Objective:** - The student is provided with the knowledge Practices Applications and Innovative of psychological aspects of sports performance.

**Learning Outcomes:**

After completing the course, the students will be able to:

- Understand Concept, Scope, role of sports and exercise psychologist, Importance of Sports and exercise psychology and Historical development and future of Sports and Exercise Psychology
- Motivate athletes
- Understand Arousal and Anxiety: Types, phenomena of Anxiety in relation to performance – Drive Theory, Inverted U Theory and IZOF.
- Understand the concept of Personality and Team Cohesion
- Understand Aggression in sports, Leadership in Sports, psychological preparation, Goal setting and self-confidence
- Assess Motivation, Anxiety, Personality, Team Cohesion and Aggression

#### **THEORYSYLLABUS (45 HOURS)**

##### **UNIT-I (12 HOURS)**

- (i) Sports and Exercise Psychology
- (ii) Concept, Scope, role of sports and exercise psychologist
- (iii) Importance of Sports and exercise psychology
- (iv) Historical development and future of Sports and Exercise Psychology,

##### **UNIT-II (11 HOURS)**

- (i) Motivation: guidelines for building motivation, achievement motivation.
- (ii) Arousal and Anxiety: Types, phenomena of Anxiety in relation to performance – Drive

### **UNIT-III**

**(11 HOURS)**

- i. Personality- approaches to personality–Trait, types and psychodynamic theories, determinants of personality, assessment of personality.
- ii. Team Cohesion: a conceptual model of Cohesion, assessment of Cohesion, relationship of Cohesion with performance.

### **UNIT-IV (11 HOURS)**

- i. Aggression in sports: types, phenomena of Aggression–Instinct Theory and Social Learning Theory, Assessment of Aggression and Leadership in Sports
- ii. Psychological preparation–Long-term and short-term psychological preparation, Goal setting and self-confidence

### **PRACTICAL SYLLABUS (30 HOURS)**

1. Measurement of Motivation
2. Measurement of Anxiety
3. Measurement of Personality
4. Measurement of Team Cohesion
5. Measurement of Aggression

### **SUGGESTED READINGS:**

- 1.Coaklay,J.J.(2009) .Sporting Sociology, Issues and controversies,
- 2.Cohen RJ and Swerdli ME (2002). Psychological testing and Assessment: An Introduction to Tests and Measurement. McGraw Hill.NewYork.U.S.A.
- 3.Liukkonen JED (2007).Psychology for Physical Educators. Human Kinetics.U.S.A.
- 4.Kornspan.S ,Alan (2009), Fundamentals of sports and exercise psychology, Human kinetics.
- 5.Rober, Weinberg.S &Gould ,Daniel (2011), Foundations of sports and exercise psychology (Fifth edition), Human kinetics.
- 6.Andrew, Lane. M (2016), Sports and exercise psychology, Routledge Taylor and Francis group.

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### SEMESTER-III

#### **BSc-PE-DSC-9(4):-PROFESSIONAL PREPARATION AND CAREER AVENUES IN PHYSICAL EDUCATION AND SPORTS**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSC-9(4) PROFESSIONAL PREPARATION AND CAREER AVENUES IN PHYSICAL EDUCATION AND SPORTS</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>Class XII pass</b>	<b>Nil</b>

**L**

#### **Learning Objectives:**

1. To develop an understanding of professional preparation in physical education.
2. To develop skills to meet professional requirements.
3. To understand the need for professional development.
4. To acquire skills and competencies for professional development.

#### **Learning Outcomes: After completion of the course the student will -**

1. Understand professional preparation in physical education, comparing perspectives from pre- and post-independence India and other countries.
2. Apply the knowledge of the foundation, objectives, and characteristics of professional preparation in preparing programs, courses available in physical education and sports
3. Understand the role of physical education teachers and institutes.
4. Define and understand concepts such as profession, professional, and professionalism in physical education, explore career avenues at different educational levels, and apply learning through practical activities like case studies and surveys.

### **THEORY SYLLABUS (45 HOURS)**

#### **UNIT-I HISTORICAL PERSPECTIVE (10 HOURS)**

1. Professional Preparation in India
2. Pre-Independence perspective
3. Post-Independence perspective



## **UNIT-II PROFESSIONAL PREPARATION PROGRAMMES (12 HOURS)**

1. Foundation: need, objectives, and characteristics of professional preparation programs
2. Courses available in physical education and sports
3. Role of physical education teachers and institutes in professional preparation programs

## **UNIT-III PHYSICAL EDUCATION AND PROFESSIONALISM (11 HOURS)**

1. Concept and meaning of Profession, Professional and Professionalism
2. Physical education as a profession

## **UNIT-IV CAREER AVENUES & JOB OPPORTUNITIES IN PHYSICAL EDUCATION & SPORTS (12 HOURS)**

1. Career avenues after certificate course, diploma, under-graduation and post-graduation, and research degrees.
2. Planning for a career: self-assessment, motivational dynamics, decision-making, counseling, and guidance
3. Challenges and opportunities in physical education
4. Inter-relationships among various careers in physical education and sports

## **PRACTICAL SYLLABUS (30 HOURS)**

1. Case study on National Sports Policy
2. Case study on National Education Policy highlighting the role of physical education.
3. A Survey on current job avenues with certificate courses, diploma courses, under-graduation degrees, post-graduation degrees, and doctoral degrees in physical education.

## **SUGGESTED READINGS:**

1. Gupta Rakesh, Sharma Akhilesh, and Sharma Santosh, 2004 Professional Preparation and Curriculum Designing Physical Education & Sports Sciences, New Delhi, Friends Publications,.
2. Sandhu Kiran, 2004. Professional Preparation and Career Development in Physical Education, New Delhi, Friends Publications,.
3. Sandhu Kiran 2006, Trends and Development in Professional Preparation in Physical Education, New Delhi, Friends Publication,.
4. Zeigler E.F, 2007 Professional and Scholarly Foundation of Physical Education and Kinesiology, Sports Educational Technologies,.
5. Gupta, Rakesh (2017), Curriculum design, Friends publications.
6. Sharma, J.P (2005), Curriculum design in Physical education, Khel Sahitya Kendra.
7. James, Jose (2005) Curriculum design in Physical education and sports, Friends publications.

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## SEMESTER- III

### BSc-PE-DSE-1 (4): OPTIONAL GAME-1

**\*\* (Select any one game (as per the list) \*\* that hasn't been chosen before in Sem I & II as DSC & as per the facility available)**

### BSc-PE-DSE-1(4)-101:ATHLETICS

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-1(4)-101:ATHLETICS	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:** The student will

1. Gain knowledge of the historical development, organizational structure, and playfield technology of an Athletics
2. Understand and interpret the rules of various events in track and field, as well as the physiological aspects of warming up and technical coaching.
3. Acquire skills in the sport, learn about various fitness tests and skill evaluations, and assess player performance in technical practices such as sprint races, middle and long-distance races, hurdles, long jump, and shot put.
4. Learn about various fitness components and their forms, and apply this knowledge to improve performance, including track and arena marking for selected events.

### THEORY SYLLABUS (30 HOURS)

#### UNIT-I (07 HOURS)

- Historical Development and Modern Trends (National and International Level)
- Organizational Structure (State, National, and International Level)

#### UNIT-II (08 HOURS)

- Rules related to various Track & field events
- Basis of Warming up and Cooling down and its effect.
- Techniques of Coaching–Peptalk, Pre, during, and Post competition Coaching.

### **UNIT-III (08 HOURS)**

- Basic skills and techniques in various Track & field events: sprint races, middle and long-distance races, hurdles races, jumping event-long jump, throwing events put, hammer throw.

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components related to various Track & field events
- Track marking and marking of different arenas for selected events mentioned in UNIT-III.

### **PRACTICAL(60 HOURS)**

1. Learning and demonstrating various skills/techniques of sprint races, middle and long-distance races, jumping events jump & High Jump, throwing events put & Discus.
2. Track marking and marking of different arenas for selected events in UNIT III.

### **SUGGESTED READINGS:**

- Chauhan VS (1999). Khel Jagat Mein Athletics. A.P. Pub, Jalandhar.
- Bompa O. Tudor and Halff G. Gregory. (2009). Periodization Theory and Methodology of Training Human kinetics. NY.
- Handbook-Rules and Regulation. International Athletic Federation (2010).
- Kumar, Pardeep. (2008). Historical Development of Track & Field. Friends Publication. New Delhi
- Maughan, R. and Gluson, M. (2004). The Biomechanical Basics of Athletic Performance. Oxford University Press, U.K.
- Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

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**SEMESTER- III**  
**BSc-PE-DSE-1 (4)-102: BADMINTON**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-1(4)-102 BADMINTON</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:**

After completing the course, the students will be able to:

- Understand, interpret and analyze proficiency in a game of one's choice.
- Identify Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
- Understand and interpret the rules of game as well as game knowledge in the areas of psychological basis
- Acquire various skills of sports
- Evaluate fitness and skill test as well as the evaluate player's performance.
- Understand fitness components and its forms.
- Enhance performance on the basis of knowledge gained in understanding various fitness components.
- Construct different Field/ Courts for the game.

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National, and International Level)
- Introduction to Badminton Court

**UNIT-II (08 HOURS)**

- Rules and their interpretation.

- Basis of Warming up and Cooling down and its effect.

### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills

Drills to improve skills in Badminton

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Badminton performance

### **PRACTICAL SYLLABUS (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Badminton

### **SUGGESTED READINGS:**

1. Bompa O Tudor and Halff G. Gregory.(2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
2. Brahm Bernd-Voler.(2010).Badminton Handbook.Mayer&MayerSports:UK.Unt-II,III&IV-p-9-14.
3. Grice,T.(2007).Badminton:StepstoSuccess.2<sup>nd</sup>Ed.HumanKinetics,USA.
4. GuptaR.KumarP.andTyagiS.(2008).TextbookonTeachingSkillandProwess(PartI &II).Friends P ublication .New Delhi.
5. Singh, MK.(2007).Comprehensive Badminton. Friends Pub. New Delhi.
6. Vanaik A.(2005).Playfield Manual, Friends Publication. New Delhi.
7. Vanaik A.(2017).Officiating and Coaching, Friends Publication. New Delhi.

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**SEMESTER- III**  
**BSc-PE-DSE-1 (4)-103: BASKETBALL**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-1(4)-103: BASKETBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Understand, interpret and analyze proficiency in a game of one's choice.
2. Identify Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
3. Understand and interpret the rules of game as well as game knowledge in the areas of psychological basis
4. Acquire various skills of sports
5. Evaluate fitness and skill test as well as the evaluate player's performance.
6. Understand fitness components and its forms.
7. Evaluate different components of fitness
8. Enhance performance on the basis of knowledge gained in understanding various fitness components.
9. Construct different Field/Courts for the game

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Basketball Court

**UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Basketball

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Basketball performance

### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills in Basketball

### **SUGGESTED READINGS**

- Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human Kinetics.NY.
- Drewett,J.(2007).How to Improve at Basketball .Crab Tree Publishing Co.,USA.
- Jain Naveen (2003).Playand Learn BasketBall .Khel Sahitya Kendra.NewDelhi.
- Singh,Hardayal.(2019).Science of Sports Training. DVS Publication,N.Delhi.
- Wilmore & Costill (2004).Physiology of Sports & Exercise.Human Kinetics,US.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

### SEMESTER- III

#### BSc-PE-DSE-1(4)-104: CRICKET

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-1(4)-104 CRICKET	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:** After completing the course, the students will be able to:

- Understand, interpret and analyze proficiency in a game of one's choice.
- Identify Historical Development, Organizational Structure and Playfield Technology of the respective sport/ game.
- Understand and interpret the rules of game as well as game knowledge in the areas of psychological basis
- Acquire various skills of sports
- Evaluate fitness and skill test as well as the evaluate player's performance.
- Understand fitness components and its forms.
- Evaluate different components of fitness
- Enhance performance on the basis of knowledge gained in understanding various fitness components.
- Construct different Field/Courts for the game.

#### **THEORY SYLLABUS (30 HOURS)**

##### **UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Cricket ground

##### **UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.



### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Cricket

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Cricket performance

### **PRACTICAL SYLLABUS - (60 HOURS.)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Cricket

### **SUGGESTED READINGS: -**

1. Bompa O. Tudor and Halff G. Gregory. (2009) "Periodization Theory and Methodology of Training" Human kinetics. NY.
2. Boycott, G. (2010). Play Cricket the Right Way. Great Northern Books Limited, U.K.
3. Cricket (2008). Sports Skills: Cricket Fielding (Know the Game). A & C Black Publishers.
4. Hobbs, J. (2008). The Game of Cricket As it should be played. Jepson Press, USA.
5. Singh, Hardayal. (2019). Science of Sports Training. DVSPublication, N. Delhi.
6. Vanaika A. (2017). Officiating and Coaching, Friends Publication. New Delhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-III**  
**BSc-PE-DSE-1(4)-105: FOOTBALL**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-1(4)-105: FOOTBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcome:-**The student attains knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice.

1. A student will be able to gain knowledge concerning Historical Development, Organizational Structure and Playfield Technology of a sport/game.
2. A student will be able to understand and interpret the rules of the game as well as game knowledge in the areas of physiological basis of Warming up and technical aspects of coaching.
3. A student will be able to learn and acquire various skills of sports/games, gain knowledge about different techniques evaluation as well as the evaluation of player's performance.
4. A student will be learning about various fitness components and their forms. Further, the student will be able to practice and improve performance on the basis of knowledge gained in understanding various fitness components and their testing.

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Football Ground

**UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition

- Basis of Warming up and cooling down and its effect.

### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Football

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Football performance

### **PRACTICAL SYLLABUS - (60 HOURS.)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Football

### **SUGGESTED READINGS**

1. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
2. Carling, C., Williams, M. and Reilling, T. (2006). Handbook of Soccer Match Analysis: A Systematic Approach to Improving Performance. Routledge Publishers, USA.
3. Long, H. and Czarnecki, J. (2007). Football for Dummies. For Dummies Publisher, USA. Developing Strength, Speed and Endurance. Routledge Publisher, USA.
4. Reilly, T. and J.C.D. Arau (2008). Science and Football V: The Proceedings of the 5th World Congress on Sports Science and Football, Volume 5.
5. Singh, Hardayal. (2019). Science of Sports Training. DVS Publication, N. Delhi.
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

### SEMESTER- III

#### BSc-PE-DSE-1(4)-106: GYMNASTICS

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-1(4)-106: GYMNASTICS	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:** After completing the course, the students will be able to:

- Understand, interpret and analyze proficiency in a game of one's choice.
- Identify Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
- Understand and interpret the rules of game as well as game knowledge in the areas of psychological basis
- Acquire various skills of sports
- Evaluate fitness and skill test as well as the evaluate player's performance.
- Understand fitness components and its forms.
- Evaluate different components of fitness
- Enhance performance on the basis of knowledge gained in understanding various fitness components.
- Construct different Field/Courts for the game.

#### THEORY SYLLABUS (30 HOURS)

##### UNIT-I (08 HOURS)

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National, and International Level)
- Introduction to Gymnastic Gymnasium

##### UNIT-II (08 HOURS)

- Rules and their interpretation

- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Gymnastics

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Gymnastics performance

### **PRACTICAL SYLLABUS - (60 HOURS.)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve various Gymnastics skills

### **SUGGESTED READINGS**

1. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Humankinetics. NY.
2. Brown(2009).How to Improve at Gymnastics. CrabtreePublishingCo., USA.
3. HarveyFJ (1998).Physical Exercises & Gymnastics. KhelSahitya.NewDelhi.
4. JainR(2005).PlayandLearnGymnastics.KhelSahitayaKendra
5. Mitchell,D.,Davis, B.andLopez,R.(2002). Teaching FundamentalGymnasticsSkills.HumanKinetics, USA.
6. Price, R.G. (2006). The Ultimate Guide to Weight Training for Gymnastics. 2<sup>nd</sup>Ed.Sportsworkout.com.
7. SchlegelEandDunn,CR.(2001).TheGymnasticsBook:TheYoungPerformer’sGuideto Gymnastics.FireflyBooks,USA.
8. Singh,Hardayal.(2019).ScienceofSportsTraining.DVSPublication,N.Delhi.
9. Stickland,L.R.(2008).GenderGymnastics.TransPacificPress,Japan.
10. VanaikaA.(2017).OfficiatingandCoaching,FriendsPublication.NewDelhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**SEMESTER- III**  
**BSc-PE-DSE-1(4)-107: HANDBALL**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-1(4)-107: HANDBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcome:-**The student attains knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice.

1. A student will be able to gain knowledge concerning Historical Development, Organizational Structure and Playfield Technology of a sport/game.
2. A student will be able to understand and interpret the rules of the game as well as game knowledge in the areas of physiological basis of Warming up and technical aspects of coaching.
3. A student will be able to learn and acquire various skills of sports/games, gain knowledge about different techniques evaluation as well as the evaluation of player's performance.
4. A student will be learning about various fitness components and their forms. Further, the student will be able to practice and improve performance on the basis of knowledge gained in understanding various fitness components and their testing.

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Handball Court

**UNIT-II (08 HOURS)**

- Rules and their interpretation

- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and post-match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Handball

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Handball performance

### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills in Handball

### **SUGGESTED READINGS: -**

1. Bompa O. Tudor and Half G. Gregory. (2009) Periodization Theory and Methodology of Training” Human Kinetics. NY.
2. Jain D (2003). Play & Learn Handball. Khel Sahitya Kendra. New Delhi.
3. Kleinman, I. (2009). Complete Physical Education Plans. 2<sup>nd</sup> Ed. Human Kinetics, USA.
4. Page, J. (2000). Ball Games. Lerner Sports Publisher, USA.
5. Phillips, B. E. (2009). Fundamental Handball. Kessinger Publishers, USA.
6. Singh, Hardayal. (1919). Science of Sports Training. DV S Publication, N. Delhi.
7. Surhone, L. M. et. al, (2010). Team Handball. Betascript Publishing, USA
8. Vanaika A. (2017). Officiating and Coaching, Friends Publication. New Delhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

### SEMESTER- III

#### BSc-PE-DSE-1(4)-108: HOCKEY

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-1(4)-108: HOCKEY	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:** After completing the course, the students will be able to:

- Understand, interpret and analyze proficiency in a game of one's choice.
- Identify Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
- Understand and interpret the rules of game as well as game knowledge in the areas of psychological basis
- Acquire various skills of sports
- Evaluate fitness and skill test as well as the evaluate player's performance.
- Understand fitness components and its forms.
- Evaluate different components of fitness
- Enhance performance on the basis of knowledge gained in understanding various fitness components.
- Construct different Field/Courts for the game.

#### **THEORY SYLLABUS (30 HOURS)**

##### **UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Hockey Ground

##### **UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.



### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Hockey

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Basketball performance

### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills in Hockey

### **SUGGESTED READINGS -**

1. Bompa O. Tudor and Halff G. Gregory. (2009)“ Periodization Theory and Methodology of Training” Human kinetics. NY.
2. International Hockey Federation, Rules of the Game of Hockey with Guidance for Players and Umpires. International Hockey Federation.
3. Pecknold,R.andFoeste,A.(2009).Hockey:EssentialSkills.McGrawHills,USA. Illustrated edition. Sterling Publishers, USA.
4. Singh,Hardayal.(1919).ScienceofSportsTraining.DVSPublication,N.Delhi.
5. Walter,R.andJohnson,M.(2009).HockeyPlaysandStrategies.HumanKinetics,USA.
6. Wukovits,J.F.(2000).HistoryofHockey1<sup>st</sup>Ed.LucentBooks,USA.
7. Vanaik A.(2017).Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

### SEMESTER- III

#### BSc-PE-DSE-1(4)-109: JUDO

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-1(4)-109: JUDO	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Understand, interpret and analyze proficiency in a game of one's choice.
2. Identify Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
3. Understand and interpret the rules of game as well as game knowledge in the areas of psychological basis
4. Acquire various skills of sports
5. Evaluate fitness and skill test as well as the evaluate player's performance.
6. Understand fitness components and its forms.
7. Evaluate different components of fitness
8. Enhance performance on the basis of knowledge gained in understanding various fitness components.
9. Construct different Field/Courts for the game.

#### **THEORY SYLLABUS (30 HOURS)**

##### **UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Judo Dojo

##### **UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

##### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and post-match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Judo

#### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Judo performance

#### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Learning to demonstrate various tests to evaluate motor components as listed in UNIT IV above.

#### **SUGGESTED READINGS**

1. Bompa O. Tudor and Halff G. Gregory. (2009) "Periodization Theory and Methodology of Training" Human Kinetics. NY.
2. Diago, T. (2005). Kodokan Judo Throwing Techniques. Kodansha International Publishers, Japan.
3. Harrison EJ (2002). Coaching Successfully Judo. Sports. Delhi.
4. Jain D (2003). Play and Learn Judo. Khel Sahitaya Kendra. New Delhi.
5. Law, M (2009). Falling Hard: A Journey into the World of Judo. Trumpeter Publisher, Japan.
6. Putin, V, Shestakov, V. adevitsky, A. (2004). Judo: History, Theory and Practice. Blue Snake Books, Moscow.
7. Singh, Hardayal. (2019). Science of Sports Training. DVSPublication, N. Delhi.
8. Takahashi M. (2005). Mastering Judo. Human Kinetics, USA.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

### SEMESTER- III

#### BSc-PE-DSE-1(4)-110: KABADDI

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-1(4)-110: KABADDI	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Understand, interpret and analyze proficiency in a game of one's choice.
2. Identify Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
3. Understand and interpret the rules of game as well as game knowledge in the areas of psychological basis
4. Acquire various skills of sports
5. Evaluate fitness and skill test as well as the evaluate player's performance.
6. Understand fitness components and its forms.
7. Evaluate different components of fitness
8. Enhance performance on the basis of knowledge gained in understanding various fitness components.
9. Construct different Field/Courts for the game.

#### THEORY SYLLABUS (30 HOURS)

##### UNIT-I (08 HOURS)

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Kabaddi Court

##### UNIT-II (08 HOURS)

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Kabaddi

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Kabaddi performance

### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Kabaddi

### **SUGGESTED READINGS:**

- Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics.NY.
- Kumar, Dharmander.(2018).Kabaddi andI t’s Playing Techniques. Writers Choice, New Delhi.
- Mishra,S.C.(2007).Teach YourselfKabaddi.SportsPublications,NewDelhi.
- Singh,Hardayal.(1919).ScienceofSportsTraining.DVSPublication,N.Delhi.
- Syal,M.(2004).Kabaddi Teaching. Prerna Parkashan, NewDelhi.
- VanaikA.(2017).OfficiatingandCoaching,FriendsPublication.NewDelhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

## SEMESTER- III

### BSc-PE-DSE-1(4)-111: KHO-KHO

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-1(4)-111: KHO-KHO	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Understand, interpret and analyze proficiency in a game of one's choice.
2. Identify Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
3. Understand and interpret the rules of game as well as game knowledge in the areas of psychological basis
4. Acquire various skills of sports
5. Evaluate fitness and skill test as well as the evaluate player's performance.
6. Understand fitness components and its forms.
7. Evaluate different components of fitness
8. Enhance performance on the basis of knowledge gained in understanding various fitness components.
9. Construct different Field/Courts for the game.

#### **THEORY SYLLABUS (30 HOURS)**

##### **UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Kho Kho ground

##### **UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition

- Basis of Warming up and cooling down and its effect.

### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Kho Kho

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Kho Kho performance

### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Kho-Kho

### **SUGGESTED READINGS:**

- Bompa O. Tudor and Half G. Gregory. (2009) "Periodization Theory and Methodology of Training" Human Kinetics. NY.
- Chakrabarty G (2002). Kho-Kho Aveloken. Khel Sahitya Kendra. Delhi.
- Singh, Hardayal. (2019). Science of Sports Training. DVSPublication, N. Delhi.
- Vanaik A. (2005). Playfield Manual, Friends Publication. New Delhi
- Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**SEMESTER- III**  
**BSc-PE-DSE-1(4)-112: VOLLEYBALL**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/Practic e		
<b>BSc-PE-DSE-1(4)-112: VOLLEYBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:**

After completing the course, the students will be able to:

- Understand, interpret and analyze proficiency in a game of one's choice.
- Identify Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
- Understand and interpret the rules of game as well as game knowledge in the areas of psychological basis
- Acquire various skills of sports
- Evaluate fitness and skill test as well as the evaluate player's performance.
- Understand fitness components and its forms.
- Evaluate different components of fitness
- Enhance performance on the basis of knowledge gained in understanding various fitness components.
- Construct different Field/Courts for the game

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National, and International Level)
- Introduction to Volleyball Court

**UNIT-II (08 HOURS)**



- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Volleyball

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Volleyball performance

### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Volley Ball

### **SUGGESTED READINGS**

- American Volleyball Coaches Association (2005). Volleyball: Skills & Drills. Human Kinetics, USA.
- Bompa O.Tudor and Halff G. Gregory. (2009) Periodization Theory and Methodology of Training Human kinetics. NY.
- Kenny, B. and Gregory, C. (2006). Volleyball: Steps to Success. Human Kinetics, USA.
- Scates, A. and Linn, M. (2002). Complete Conditioning for Volleyball. Human Kinetics, USA.
- Shondell, D. and Reynaud, C. (2002). The Volleyball Coaching Bible. Human Kinetics, USA.
- Singh, Hardayal. (2019). Science of Sports Training. DVSPublication, N. Delhi.
- The National Alliance for Youth. Sports (2009). Coaching Volleyball For Dummies Publishers, USA.
- Volleyball, USA (2009). Volleyball: Systems and Strategies. Human Kinetics, USA.
- Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

## SEMESTER- III

### BSc-PE-DSE-1(4)-113: YOGA

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-1(4)-113: YOGA	4	2	0	2	Class XII pass	Nil

**Learning Objective:** -The Students will acquire knowledge and understanding of a specific sport in which an individual wish to excel.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Understand Origin of yoga, definition and scope of yoga, limitations and misconceptions, importance of yoga in physical education and other fields
2. Learn about the prayer, perform Asanas, Pranayama, Shatkarma, Bandha.
3. Treat Disease through yoga therapy- Asthma, high & low B.P, diabetes, obesity, heart disease, insomnia, arthritis, backache & female disease.
4. Apply Yoga-Nidra/Relaxation techniques
5. Understand Diet & constitution, components of nutrition, water, natural diet, balanced diet, fasting-its benefits, types & preparation.

### THEORY SYLLABUS (30 HOURS)

#### UNIT-I (07 HOURS)

- Origin of yoga, definition, and scope of yoga, limitations, and misconceptions of Yoga
- Importance of yoga in physical education and other fields
- Yoga asana competition at: - State, National, International, SGFI, AIU, etc.

#### UNIT-II (07 HOURS)

- Philosophical aspects of Yoga-Pre-Vedic, Vedic period; Buddhism, Upanishad period, Jainism & Tantra
- Qualifications, qualities, and responsibilities of a coach,
- Duties/responsibilities of technical official, Scoring system and judgment criteria,
- Protocols for referees, judges, and officials.

#### UNIT-III (09 HOURS)

- Meaning, Techniques, Precautions & Effects of The Following:-
- Asanas: Padmasana, Vajrasana, Sidhasana, Paschimottanasa, Halasana, Sarvangasana, Shalabhasana, Ardhamatsyendrasana, Bhujangasana, Tadasana, Vrikshasana, Matsyasana, Gomukhasana, Ushtrasana, Shavasana, Makarasana, Vrishchikasana, Dhanurasana, Purna Matsyendrasana, Chakrasana, Ek Pad Sikandasana, Bakasana, Mayurasana, Shirshasana
- Pranayama: Anulom-Vilom, Bhastrika, Suryabhedhen Pranayama, Sheetali, Sheetkari, Bhramari, Ujjayi
- Shatkarma: Neti, Dhauti, Nauli, Basti, Kunjal, Kapal Bhati, Shankh Prakshalana
- Bandhas: Jalandhar, Uddyana, Mool Bandha

#### **UNIT-IV (07 HOURS)**

- Disease-wise treatment through yoga therapy- Asthma, high & low B.P, diabetes, obesity, heart disease, insomnia, arthritis, backache & female disease
- Diet & Nutrition, components of nutrition, water, natural diet, balanced diet, fasting-its benefits, types & preparation, and the importance of vegetarianism in yogic diet.

#### **PRACTICAL SYLLABUS (60 HOURS)**

1. Prayer
2. Asanas, Pranayama, Shatkarma, Bandha (As Mentioned In Theory)
3. Yoga-Nidra/Relaxation Techniques

#### **SUGGESTED READINGS**

- Anand Omprakash (2001). Yog Dawra Kaya Kalp, Kanpur. Sewasth Sahitya Perakashan
- Iyengar, B.K.S. (1995). Light on Yoga : The Bible of Modern Yoga. Schocken Publishers, USA.
- Kaminoff, L. et al (2007). Yoga Anatomy. Human Kinetics, USA.
- Kirk, M. (2005). The Hatha Yoga Illustrated. Human Kinetics, USA.
- Sharma JP and Ganesh S(2007). Yog Kala Ek Prichya. Friends Publication. New Delhi
- Sharma J. P. (2007). Manav jeevan evam yoga. Friends Publication. New Delhi.
- Sharma Jai Prakash And Sehgal Madhu(2006). Yog-Shiksha. Friends Publication. Delhi.
- Sharma Jai Prakash and Rathore Bhupender Singh (2007). Yoga Ke Tatva. Friends Publication. Delhi
- Mukerji, A.P. (2010). The Doctorine and Practice of Yoga. General Books, LLC, New Delhi.
- Norton, W.W. (2010). Yoga for Osteoporosis : The Complete Guide. W.W. Norton & Company, USA.
- Sarin N (2003). Yoga Dawara Rogoon Ka Upchhar. Khel Sahitya Kendra
- Sri Swami Rama, (2001). Breathing. Rishikesh Sadhana Mandir Trust.
- Swami Ram (2000). Yoga& Married Life. Rishikesh Sadhana Mandir Trust
- Swami Swatma Ram: Patanjali Yoga Sutra

- Swami Veda Bharti (2000). Yoga Polity. Economy and Family. Rishikesh Sadhana Mandir Trust
- Text Book Hath Yoga Pradipika
- Text Book Patanjali Yoga Sutra
- Text Book Patanjali Yoga Sutra

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-III****BSc-PE-DSE-1(4)-114: SWIMMING**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-1(4)-114: SWIMMING</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:** -The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcome:** -The student attains knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice.

1. A student will be able to learn about Historical Development, Organizational Structure and Playfield Technology of a sport/game.
2. A student will be able to understand and interpret the rules of the game as well as game knowledge in the areas of physiological basis of Warming up and technical aspects of coaching.
3. A student will be able to learn and acquire various skills of sports/games, gain knowledge about different techniques evaluation as well as the evaluation of player's performance.
4. A student will be learning about various fitness components and their forms. Further, the student will be able to practice and improve performance on the basis of knowledge gained in understanding various fitness components and their testing.

**THEORY SYLLABUS (30 HOURS)****UNIT-I (08 HOURS)**

- Introduction to Swimming game
- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)

**UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect

### **UNIT-III**

**(07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during and Post match coaching
- Basic skills and techniques of the skills
- Drills to improve skills in Swimming

### **UNIT-IV**

**(07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for swimming performance

### **PRACTICAL SYLLABUS -**

**(60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills in Swimming

### **SUGGESTED READINGS**

1. David J., Mathur M. (1994). "How to learn swimming in 30 days" UBS Publishers, New Delhi, India.
2. Jain. R. (2003). "Play and Learn Swimming" Khel Sahitya Kendra, New Delhi, India
3. Jain. D. (2003). "Swimming Skills & Rules" Khel Sahitya Kendra, New Delhi, India
4. Hardy, Colin (1987) "Handbook for the Teacher Of Swimming" Pelham books ltd., London (U.K)
5. Bompa O. Tudor and Half G. Gregory. (2009) "Periodization Theory and Methodology of Training" Human kinetics. NY.
6. Thomas, David G., (2005). "Swimming STEPS TO SUCCESS" Human Kinetics, U.S.A
7. Singh, Hardayal. (1919). Science of Sports Training. DVS Publication, N. Delhi.
8. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

### Semester-III

#### BSc-PE-DSE-1(4)-115: WRESTLING

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-1(4)-115: WRESTLING	4	2	0	2	Class XII pass	Nil

**Learning Objective:** -The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcome:** -The student attains knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice.

1. A student will be able to learn about Historical Development, Organizational Structure and Playfield Technology of a sport/game.
2. A student will be able to understand and interpret the rules of the game as well as game knowledge in the areas of physiological basis of Warming up and technical aspects of coaching.
3. A student will be able to learn and acquire various skills of sports/games, gain knowledge about different techniques evaluation as well as the evaluation of player's performance.
4. A student will be learning about various fitness components and their forms. Further, the student will be able to practice and improve performance on the basis of knowledge gained in understanding various fitness components and their testing.

#### **THEORY SYLLABUS (30 HOURS)**

##### **UNIT-I**

**(08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Wrestling Game

##### **UNIT-II**

**(08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III**

**(07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Wrestling

### **UNIT-IV**

**(07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Wrestling performance

### **PRACTICAL SYLLABUS -**

**(60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills in Wrestling.

### **SUGGESTED READINGS**

1. Gable, D. (1999) “Coaching Wrestling Succesfully” Human Kinetics, U.S.A
2. Camaione D. & Tillman K. (1980) “Teaching & Coaching Wrestling A Scientific Approach” John Wiley & Sons. Inc., U.S.A.
3. Kumar N. (2005) “Play & Learn Wrestling” Khel Sahitya Kendra, New Delhi, India.
4. Patwardhan G. (2002) “Coaching Succesfully Wrestling” Sports Publication, Delhi.
5. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

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**Semester-III**  
**BSc-PE-DSE-1(4)-116: TABLE TENNIS**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-1(4)-116: TABLE TENNIS</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:** -The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcome:** -The student attains knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice.

1. A student will be able to gain knowledge concerning Historical Development, Organizational Structure and Playfield Technology of a sport/game.
2. A student will be able to understand and interpret the rules of the game as well as game knowledge in the areas of physiological basis of Warming up and technical aspects of coaching.
3. A student will be able to learn and acquire various skills of sports/games, gain knowledge about different techniques evaluation as well as the evaluation of player's performance.
4. A student will be learning about various fitness components and their forms. Further, the student will be able to practice and improve performance on the basis of knowledge gained in understanding various fitness components and their testing.

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I (08 HOURS)**

Historical Development and Modern Trends (National and International Level)

- Organizational structure (State, National and International Level)
- Introduction to Table Tennis Game

**UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III**

**(07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Table Tennis

### **UNIT-IV**

**(07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility
- Importance of skill-related components for Table Tennis performance

### **PRACTICAL SYLLABUS -**

**(60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Table Tennis

### **SUGGESTED READINGS**

1. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
2. Jain D. (2001) “ Teaching& Coaching Table Tennis” Khel Sahitya Kendra, Delhi.
3. Burn B. (1979) “ The Science of Table Tennis” S. Chand & Company ltd., N. Delhi.
4. Singh, Hardayal. (1919). Science of Sports Training. DVS Publication, N. Delhi.
5. Jain D. (2003) “Table Tennis skills & Rules” Khel Sahitya Kendra, N. Delhi.
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

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**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**  
**UGCF: B.SC. PHYSICAL EDUCATION, HEALTH EDUCATION AND SPORTS (HONS.) NEP-2020**

**B.Sc (PE, HE & S) Hons.**

<b>SEMESTER</b>	<b>COURSE</b>	<b>CONTENT /CREDITS *</b>
<b>IV</b>	<b>Discipline Specific Course (DSC)</b>	<b>DSC-10 (4): Sports Sociology</b> <b>DSC-11 (4): Sports Biomechanics</b> <b>DSC-12 (4): Exercise Prescription for Fitness and Health</b>
	<b>Discipline Specific Elective (DSE)</b> <b>OR</b> <b>Generic Elective (GE)</b>	<b>Choose one DSE from a pool of Courses</b> <b>DSE-2(4)-201: Optional Game 2**</b> <b>(Select any one game (from the list) that hasn't been chosen before in Sem I, II &amp; III as DSC/DSE&amp; as per the facility available)</b> <b>OR</b> <b>Choose one GE (GE -3) from a pool of courses (of other Departments) (4)</b>
	<b>Ability Enhancement Course (AEC)</b>	<b>Choose one from a pool of AEC courses (2)</b>
	<b>Skill Enhancement Course (SEC)</b> <b>OR</b> <b>Internship/Apprenticeship/Project (2)</b>	<b>Choose one SEC or Internship/ Apprenticeship/ Project/ Community Outreach (2)</b>
	<b>Value Addition Course (VAC)</b>	<b>Choose one from a pool of courses (2)</b>
		<b>Total Credits= 22</b>

\* (FIGURE IN BRACKETS DENOTE CREDITS)

\*\*LIST OF GAMES (Choose as per the facility available)

(i) Athletics, (ii) Badminton, (iii) Basketball, (iv) Cricket, (v) Football, (vi) Gymnastic, (vii) Handball, (viii) Hockey, (ix) Judo, (x) Kabaddi, (xi) Kho-Kho, (xii) Volleyball, (xiii) Yoga, (xiv) Swimming, (xv) Wrestling (xvi) Table Tennis

# **SEMESTER- IV**

**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**

**UNIVERSITY OF DELHI**

**B.Sc. (Hons.) (Physical Education, Health Education and Sports)**

**SEMESTER- IV**

**BSc-PE-DSC-10(4) SPORTS SOCIOLOGY**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/Practic e		
<b>BSc-PE-DSC-10(4) SPORTS SOCIOLOGY</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:**

To provide the knowledge and applications of Sports sociology as well as to familiarize the learners with the concepts of sociology, culture and sport, Socialization and sports, Gender and sports as well as sports education with application point of view.

**Learning Outcomes:** At the end of the course, the student will be able to

- Understand the meaning and importance of sports sociology
- Understand the concept of culture and sports along with its components to deal with cultural aspects
- Differentiate between gender, feminism social, cultural & economic barriers to women's participation in sports.
- Identify sports as a tool for gender equality & women empowerment in the present day context.
- Understand the importance and applications of sports sociology.
- Explain sociological perspectives with sports.
- Inculcate the sports culture in their life & society.
- Establish the relationship between society and sports.
- Understand the significance of socialization through games and sports for development of the society.

## **THEORY SYLLABUS (45 HOURS)**

### **UNIT-I Introduction**

- 1.1 Meaning & definitions of sociology & sports sociology
- 1.2 Aim and importance of sports sociology
- 1.3 Meaning and importance of society
- 1.4 Sports as a part of society

### **UNIT-II Culture and sports**

- 2.1 Concept of culture & sports culture
- 2.2 Characteristics of Sports Culture
- 2.3 Functions of sports culture
- 2.4 Components of sports culture

### **UNIT-III Socialization and Sports**

- 3.1 Concept of Socialization & Sports Socialization
- 3.2 Importance of sports socialization
- 3.3 Types of sports socialization
- 3.4 Agents of sports socialization

### **UNIT-IV Gender and sports**

- 4.1 Meaning of Gender and Feminism
- 4.2 Social, cultural & economical barriers to women's participation in sports
- 4.3 Gender discrimination and equality in sports
- 4.4 Sports as a tool for gender equality & women empowerment.

## **PRACTICAL SYLLABUS (30 HOURS)**

1. Collect data and analysis on the status of women in sports in society/Community
2. Conduct a survey of any sports choice based on commercial growth.
3. Superstition scale collect data and write an article on at least 15 members of a sports team
4. Cultural determination test (collect data and write an article on at least 10 members of the sports team)

### **SUGGESTED READINGS**

1. Rajveer Khel Samaj Shastra, 2010 Sports Publication, New Delhi,
2. Kumar, Dharmander, 2022 "Fundamentals of Sports Sociology" Wriar Choice publication, New Delhi,
3. Rao, Shankar 2012 "Principles of Sociology" S. Chand & Company, New Delhi, Nirja Publishers & printer, India,.
4. Gupta, M.L. & Sharma, D. D. D 2004 "Samajshastra" SahityaBhawan Publication,
5. Bhusan, V. and Sachdeva, 2003 An Introduction to Sociology, Delhi: Kitab,.
6. IGNOU, 2007 The Study of Society - Understanding Sociology, Delhi - IGNOU,.

7. Jain, Rachna, 2005 Sports Sociology, New Delhi: Khel Sahitaya Kendra,.
8. Knop, P.D., Engstrow, L.M., Sbisstadd, B., Uleiss, M.R., 1996 World Wide Trends In Youth Sport, Human Kinetics
9. Maguire, J. and Young JAI, K., 2005 Theory, Sport and Society, Elsevier Ltd.
10. Majuadar, B., and Morgan Reutledge, J. A., 2005 Sport in South Asian Society Past and Present edited, New York and London
11. Moping Sense of Sports, 2000 by Ellis Cashmore Routeedge, New York,
12. Rawat, H.K. Sociology Basic concepts, 2007 Rawat Publication
13. Roulledge, M. Abrow, 2001 Sociology, The Basics London
14. Sandhu, Kanwaljit Singh, 2000 Sport Sociology, New Delhi : Friends Pub.,.
15. Singh, Bhupinder, Sports Sociology, 2004 New Delhi : Friends,.
16. Singh, J.P., Samaajshastra Avdharanaaye Aur Sidhaant 1999, Prentis Hall of India New Delhi
17. Sports in Contemporary Society: An ethnology worth publications, New York-2001
18. Stanly eitzan and George H. Sage, 1997 Sociology of world American Sports, Bastow, M. A: W C B/Mcgraw Hill
19. Turner, B., 2006 Cambridge Dictionary of Sociology, U.K., Cambridge, U.N. Press.,
20. Woods, Ronald B., 2007 Social issues in Sports, Human Kinetics

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## SEMESTER- IV

### BSc-PE-DSC-11 (4) :SPORTS BIOMECHANICS

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSC-11 (4): SPORTS BIOMECHANICS	4	3	0	1	Class XII pass	Nil

**Learning Objective:** The objective of this course is to provide an understanding with practical skills to the learners about Sports Biomechanics and its applications to sports as well as to develop the foundation of sports biomechanics for performance analysis and improvement.

**Learning Outcomes :** At the end of the course the student will be able to-

1. Understand the fundamental concepts and practices related to Sports Biomechanics.
2. Develop an understanding for practical applications of the fundamental structure of movement with related mechanics and its principles.
3. Analyze the sport movements and design movement-oriented exercise for improvement of performance.
4. Develop the program for improving performance as an innovative approach applying biomechanics.
5. Apply the knowledge and skills related to science of movement to
6. create a strong foundation for better sports performance and research.

### **THEORY SYLLABUS (45 HOURS)**

#### **UNIT – I Introduction to Sports Biomechanics (10 Hours)**

- i. Meaning and Definition of Sports Biomechanics.
- ii. Importance of Sports Biomechanics to Physical Education Teacher, Athletes and Sports Coaches.
- iii. Terminology of Fundamental Movements- Fundamental concepts of Centre of Gravity, Equilibrium, Line of Gravity

#### **UNIT – II Mechanical Concepts (10 Hours)**

- i. Force - Meaning, definition, types and its application to sports activities
- ii. Lever - Meaning, definition, types and its application to human body.
- iii. Newton's Laws of Motion – Meaning, definition and its application to sports activities (linear and angular).
- iv. Projectile – Factors influencing projectile trajectory.



### **UNIT – III Kinematics of Human Movement (10 Hours)**

- i. Linear Kinematics – Distance and Displacement, speed and velocity, Acceleration
- ii. Angular kinematics – Angular Distance and Displacement, Angular Speed and velocity, Angular Acceleration.

### **UNIT – IV Kinetics of Human Movement And Biomechanical Principles (15 Hours)**

- i. Linear Kinetics – Inertia, Mass, Momentum, Friction.
- ii. Angular Kinetics – Moment of Inertia, Couple, Stability.
- iii. The Principle of the Optimum Path of Acceleration.
- iv. The Principle of the Initial Force.
- v. The Principle of Reaction.
- vi. The Principle of Conservation of Momentum.

### **PRACTICAL SYLLABUS (30 Hours)**

1. Evaluation of Velocity- Time Graph.
2. Determination of Centre of Gravity by Reaction Board Method.
3. Determination of Centre of Gravity by Joint Point Method.
4. Determination of Centre of Gravity by Main Point Method.
5. Determination of Centre of Combined Gravity (Joint Point Method).
6. Demonstration of the Principle of Conservation of Angular Momentum.
7. Demonstration of the Principle of Action and Reaction.

### **SUGGESTED READINGS:**

1. Shaw, D. (2003). Sports Biomechanics. Khel Sahitya Kendra.
2. Shaw, D. (2022). Biomechanics and Kinesiology of Human Motion. Khel Sahitya Kendra.
3. Shaw, D. (2007). Mechanical Basis of Bio-Mechanics. Sports Publication.
4. Shaw, D. (2018). Pedagogic Kinesiology. Sports Publication.
5. Shaw, D. & Kumar, G. (2022). Kinesiology of Exercises with Apparatus. Khel Sahitya Kendra.
6. Shaw, D. & Mathur, N. (2022). Kinesiology of Freehand Exercises. Sports Publication.
7. Bunn, J. W. (1972). Scientific Principles of Coaching. Englewood Cliffs, N.J.: Prentice Hall Inc.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

## SEMESTER- IV

### BSc-PE-DSC-12 (4): EXERCISE PRESCRIPTION FOR FITNESS AND HEALTH

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSC-12 (4): EXERCISE PRESCRIPTION FOR FITNESS AND HEALTH</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:** The objective of this course is to provide an understanding, skill and practices to the learners about exercise prescription for health and fitness.

**Learning Outcomes:** At the end of the course the student will be able to: -

1. Acquire the knowledge and practices of exercise prescription on behalf of health status.
2. Deal with differentiation and the relation between exercise & physical activity.
3. Understand and demonstrate the direct and indirect health benefits of the exercise
4. Get an understanding and applications of acronyms FITT (Frequency, Intensity, Time (duration), type (Mode of Exercise) (Training principles for better training)

### THEORY SYLLABUS (45 HOURS)

#### UNIT I - (09 Hours)

1. Exercise Prescription: Definition, Concept, and significance of exercise prescription.
2. Scientific Basis of Exercise Prescription
3. Guidelines to be followed while starting an exercise program.

#### UNIT II - (09 Hours)

1. Meaning and definition of exercise & physical activity
2. Differences between exercise & physical activity (chronic and acute effects for adaptation)
3. Relation between exercise & physical activity

#### UNIT III - (09 Hours)

1. Effect of sedentary lifestyle on health and Health benefits of exercise.
2. Sedentary population, Special population (Children, Expectant mothers, and the older population).

3. Stages of behavior Change in adapting regular exercise regimen.

#### **UNIT IV - (09 Hours)**

1. Exercise stress test, physical fitness test.
2. Understanding acronyms FITT (Frequency, Intensity, Time (duration), Type (Mode of Exercise)).
3. Principles of Fitness Training

#### **PRACTICAL SYLLABUS (30 HOURS)**

1. Assessment Of Health-Related Physical Fitness Components (At Least Three Components)
2. Administering The PAR-Q
3. Measurement Of Health Status Using A Health Status Questionnaire.
4. Designing An Exercise Program For A Selected Population.
5. Evaluation Of An Exercise Programme

#### **SUGGESTED READINGS-**

1. American College of Sports Medicine (2000). ACSM's Guidelines for Exercise Testing and Prescription. Lippincott Williams & Wilkins. Philadelphia. USA.
2. Corbin C G Welk W Corbin & K Welk (2005). Concepts of Fitness and Wellness. McGraw Hill Company. New York. USA.
3. Hales D (2006). An Invitation to Health. Thomson Wadsworth. Belmont. California. USA.
4. Kolecki JE and DQ Thomas (2007). Activities and Assessment Manual. Jones and Bartlett Publishers. Sandburg. Massachusetts. USA.
5. Powers S and E Howley (2006). Exercise Physiology- Theory and Applications. McGraw Hill Co. New York. USA.
6. Thomas DQ and JE Kotecki (2007). Physical Activity and Health –An Interactive Approach. Jones and Bartlett Publishers. Sndbury. Massachusetts. USA.

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## SEMESTER- IV

### BSc-PE-DSE-2 (4) : OPTIONAL GAME -II

(Select any one game from the list that hasn't been chosen before in Sem I, II & III as DSC/DSE & as per the facility available)

#### BSc-PE-DSE-2(4)-201:ATHLETICS

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-2(4)-201: ATHLETICS	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes:** After completion of the course the student will-

1. Gain knowledge of the historical development, organizational structure, and playfield technology of an Athletics
2. Understand and interpret the rules of various events in track and field, as well as the physiological aspects of warming up and technical coaching.
3. Acquire skills in the sport, learn about various fitness tests and skill evaluations, and assess player performance in technical practices such as sprint races, middle and long-distance races, hurdles, long jump, and shot put.
4. Learn about various fitness components and their forms, and apply this knowledge to improve performance, including track and arena marking for selected events.

#### **THEORY SYLLABUS (30 HOURS)**

##### **UNIT-I (07 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational Structure (State, National, and International Level)

##### **UNIT II (08 HOURS)**

- Rules related to various Track & field events
- Basis of Warming up and Cooling down and its effect.
- Techniques of Coaching–Peptalk, Pre, during, and Post competition Coaching.

##### **UNIT -III (08 HOURS)**

- Basic skills and techniques in various Track & field events: sprint races, middle and long-distance races, hurdles races, jumping event-long jump, throwing events put, hammer throw.

#### **UNIT -IV (07 HOURS)**

- Introduction to Physical Fitness components related to various Track & field events
- Track marking and marking of different arenas for selected events mentioned in UNIT-III.

#### **PRACTICAL SYLLABUS (60 HOURS)**

1. Learning and demonstrating various skills/techniques of sprint races, middle and long-distance races, jumping events jump & High Jump, throwing events put & Discus.
2. Track marking and marking of different arenas for selected events in UNIT III.

#### **SUGGESTED READINGS:**

- Chauhan VS (1999). Khel Jagat Mein Athletics. A.P. Pub, Jalandhar.
- Bompa O. Tudor and Halff G. Gregory. (2009) "Periodization Theory and Methodology of Training" Human Kinetics. NY.
- Handbook-Rules and Regulation. International Athletic Federation (2010).
- Kumar, Pardeep. (2008). Historical Development of Track & Field. Friends Publication. New Delhi
- Maughan, R. and Gluson, M. (2004). The Biomechanical Basics of Athletic Performance. Oxford University Press, U.K.
- Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**SEMESTER- IV**  
**BSc-PE-DSE-2 (4)-202: BADMINTON**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-2 (4)-202 BADMINTON</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

1. Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
2. Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
3. Acquire various skills of sports
4. Evaluate fitness and skill and player's performance.
5. Provide technical practice
6. Understand fitness components and its forms.
7. Inculcate Knowledge for practice and improvement of performance
8. Mark and maintain Court/field.

**THEORY SYLLABUS (30 HOURS)**

**UNIT I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National, and International Level)
- Introduction to Badminton Court

**UNIT -II (08 HOURS)**

- Rules and their interpretation.
- Basis of Warming up and Cooling down and its effect.

### **UNIT -III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills

Drills to improve skills in Badminton

### **UNIT -IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Badminton performance

### **PRACTICAL SYLLABUS (60 HOURS.)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Badminton

### **SUGGESTED READINGS:**

- Bompa O Tudor and Half f G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
- Brahms Bernd-Voler. (2010). Badmnton Handbook. Mayer & Mayer Sports: UK. Unt-II,III&IV-p-9-14.
- Grice, T. (2007). Badminton: Steps to Success. 2<sup>nd</sup> Ed. Human Kinetics, USA.
- Gupta R. Kumar P .and Tyagi S.(2008). Textbook on Teaching Skill and Prowess (Part-I&II). Friends Publication. New Delhi.
- Singh, MK. (2007). Comprehensive Badminton. Friends Pub. New Delhi.
- Vanaik A.(2005). Playfield Manual, Friends Publication. New Delhi.
- Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**SEMESTER- IV**  
**BSc-PE-DSE-2(4)-203: BASKETBALL**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-2(4)-203:BASKETBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

1. Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
2. Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
3. Acquire various skills of sports
4. Evaluate fitness and skill and player's performance.
5. Provide technical practice
6. Understand fitness components and its forms.
7. Inculcate Knowledge for practice and improvement of performance
8. Mark and maintain Court/field.

**THEORY SYLLABUS (30 HOURS)**

**UNIT -I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Basketball Court

**UNIT -II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

**UNIT -III (07 HOURS)**



- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Basketball

#### **UNIT -IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Basketball performance

#### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills in Basketball

#### **SUGGESTED READINGS**

- Bompa O. Tudor and Half G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
- Drewett, J. (2007). How to Improve at Basketball. Crab Tree Publishing Co., USA.
- Jain Naveen (2003). Play and Learn Basketball. Khel Sahitya Kendra. New Delhi.
- Singh, Hardayal. (2019). Science of Sports Training. DVSPublication, N. Delhi.
- Wilmore & Costill (2004). Physiology of Sports & Exercise. Human Kinetics, US.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**SEMESTER- IV**  
**BSc-PE-DSE-2(4)-204: CRICKET**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical / Practice		
<b>BSc-PE-DSE-2(4)-204 CRICKET</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

- Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
- Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
- Acquire various skills of sports
- Evaluate fitness and skill and player's performance.
- Provide technical practice
- Understand fitness components and its forms.
- Inculcate Knowledge for practice and improvement of performance
- Mark and maintain Court/field.

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Cricket ground

**UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Cricket

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Cricket performance

### **PRACTICAL SYLLABUS - (60 HOURS.)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Cricket

### **SUGGESTED READINGS:**

- Bompa O. Tudor and Halff G.Gregory.(2009) Periodization Theory and Methodology of Training Human Kinetics. NY.
- Boycott,G.(2010).PlayCrickettheRightWay.GreatNorthernBooksLimited,U.K.
- Cricket(2008).SportsSkills:CricketFielding(KnowtheGame).A&CBlackPublishers.
- Hobbs,J.(2008).TheGameofCricketAsitshouldbeplayed.JepsonPress,USA.
- Singh,Hardayal.(1919).ScienceofSportsTraining.DVSPublication,N.Delhi.
- VanaikA.(2017).OfficiatingandCoaching,FriendsPublication.NewDelhi

**Semester-IV**  
**BSc-PE-DSE-2(4)-205: FOOTBALL**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-2(4)-205: FOOTBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

1. Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
2. Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
3. Acquire various skills of sports
4. Evaluate fitness and skill and player's performance.
5. Provide technical practice
6. Understand fitness components and its forms.
7. Inculcate Knowledge for practice and improvement of performance
8. Mark and maintain Court/field.

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Football Ground

**UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Football

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Football performance

### **PRACTICAL SYLLABUS - (60 HOURS.)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Football

### **SUGGESTED READINGS**

- Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
- Carling, C., Williams, M. and Reilling, T. (2006). Handbook of Soccer Match Analysis: A Systematic Approach to Improving Performance. Routledge Publishers, USA.
- Long, H. and Czarnecki, J. (2007). Football for Dummies. For Dummies Publisher, USA.
- Developing Strength, Speed and Endurance. Routledge Publisher, USA.
- Reilly, T. and J.C.D. Arau (2008). Science and Football V: The Proceedings of the 5th World Congress on Sports Science and Football, Volume5.
- Singh, Hardayal. (2019). Science of Sports Training. DVS Publication, N. Delhi.
- Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**SEMESTER- IV**  
**BSc-PE-DSE-2(4)-206: GYMNASTICS**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-2(4)-206: GYMNASTICS</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

1. Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
2. Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
3. Acquire various skills of sports
4. Evaluate fitness and skill and player's performance.
5. Provide technical practice
6. Understand fitness components and its forms.
7. Inculcate Knowledge for practice and improvement of performance

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National, and International Level)
- Introduction to Gymnastic Gymnasium

**UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

**UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Gymnastics

#### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Gymnastics performance

#### **PRACTICAL SYLLABUS - (60 HOURS.)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve various Gymnastics skills

#### **SUGGESTED READINGS**

- Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
- Brown(2009).How to Improve at Gymnastics. Crabtree Publishing Co., USA.
- HarveyFJ (1998).Physical Exercises & Gymnastics. Khel Sahitya. New Delhi.
- JainR(2005).Play and Learn Gymnastics. Khel Sahitaya Kendra
- Mitchell,D. ,Davis, B .and Lopez,R.(2002). Teaching Fundamental Gymnastics Skills. Human Kinetics, USA.
- Price, R.G. (2006). The Ultimate Guide to Weight Training for Gymnastics. 2<sup>nd</sup>Ed.Sportsworkout.com.
- SchlegelEandDunn,CR.(2001).TheGymnasticsBook:TheYoungPerformer’sGuideto Gymnastics.FireflyBooks,USA.
- Singh,Hardayal.(1919).ScienceofSportsTraining.DVSPublication,N.Delhi.
- Stickland,L.R.(2008).Gende r Gymnastics. Trans Pacific Press, Japan.
- Vanaika.(2017).Officiating and Coaching, Friends Publication. NewDelhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

## SEMESTER- IV

### BSc-PE-DSE-2(4)-207: HANDBALL

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-2(4)-207: HANDBALL	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

1. Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
2. Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
3. Acquire various skills of sports
4. Evaluate fitness and skill and player's performance.
5. Provide technical practice
6. Understand fitness components and its forms.
7. Inculcate Knowledge for practice and improvement of performance

#### **THEORY SYLLABUS (30 HOURS)**

##### **UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Handball Court

##### **UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

##### **UNIT-III (07 HOURS)**



- Techniques of Coaching – Pep talk, Pre, during, and post-match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Handball

#### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Handball performance

#### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills in Handball

#### **SUGGESTED READINGS: -**

- Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
- JainD(2003).Play & Learn Handball. KhelSahityaKendra.NewDelhi.
- Kleinman,I.(2009).CompletePhysicalEducationPlans.2<sup>nd</sup>Ed.HumanKinetics,USA.
- Page,J.(2000).Ball Games.LernerSportsPublisher,USA.
- Phillips,B.E.(2009).Fundamental Handball. KessingerPublishers,USA.
- Singh,Hardayal.(1919).ScienceofSportsTraining.DVSPublication,N.Delhi.
- Surhone,L.M.et.al, (2010).TeamHandball.Betascript Publishing,USA
- Vanaika.(2017).Officiating and Coaching,Friends Publication.NewDelhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

## SEMESTER- IV

### BSc-PE-DSE-2(4)-208: HOCKEY

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-2(4)-208: HOCKEY	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

1. Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
2. Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
3. Acquire various skills of sports
4. Evaluate fitness and skill and player's performance.
5. Provide technical practice
6. Understand fitness components and its forms.
7. Inculcate Knowledge for practice and improvement of performance

### THEORY SYLLABUS (30 HOURS)

#### UNIT-I (08 HOURS)

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Hockey Ground

#### UNIT-II (08 HOURS)

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

#### UNIT-III (07 HOURS)

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Hockey

#### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Basketball performance

#### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills in Hockey

#### **SUGGESTED READINGS; -**

1. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
2. International Hockey Federation, Rules of the Game of Hockey with Guidance for Players and Umpires. International Hockey Federation.
3. Pecknold, R. and Foeste, A. (2009). Hockey: Essential Skills. McGrawHills, USA.
4. Illustrated edition. Sterling Publishers, USA.
5. Singh, Hardayal. (1919). Science of Sports Training. DVSPublication, N. Delhi.
6. Walter, R. and Johnson, M. (2009). Hockey Plays and Strategies. Human Kinetics, USA.
7. Wukovits, J. F. (2000). History of Hockey 1<sup>st</sup> Ed. Lucent Books, USA.
8. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

## SEMESTER- IV

### BSc-PE-DSE-2(4)-209: JUDO

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-2(4)-209: JUDO	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

1. Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
2. Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
3. Acquire various skills of sports
4. Evaluate fitness and skill and player's performance.
5. Provide technical practice
6. Understand fitness components and its forms.
7. Inculcate Knowledge for practice and improvement of performance

### **THEORY SYLLABUS (30 HOURS)**

#### **UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Judo Dojo

#### **UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

#### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and post-match coaching.

- Basic skills and techniques of the skills
- Drills to improve skills in Judo

#### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Judo performance

#### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Learning to demonstrate various tests to evaluate motor components as listed in UNIT IV above.

#### **SUGGESTED READINGS**

1. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
2. Diago, T. (2005). Kodokan Judo Throwing Techniques. Kodansha International Publishers, Japan.
3. Harrison EJ (2002). Coaching Successfully Judo. Sports. Delhi
4. Jain D (2003). Play and Learn Judo. Khel Sahitaya Kendra. New Delhi.
5. Law, M. (2009). Falling Hard: A Journey into the World of Judo. Trumpeter Publisher, Japan.
6. Putin, V., Shestakov, V. and Levitsky, A. (2004). Judo: History, Theory and Practice. Blue Snake Books, Moscow.
7. Singh, Hardayal. (1919). Science of Sports Training. DVSPublication, N. Delhi.
8. Takahashi, M. (2005). Mastering Judo. Human Kinetics, USA.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

## SEMESTER- IV

### BSc-PE-DSE-2(4)-210: KABADDI

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-2(4)-210: KABADDI	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

1. Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
2. Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
3. Acquire various skills of sports
4. Evaluate fitness and skill and player's performance.
5. Provide technical practice
6. Understand fitness components and its forms.
7. Inculcate Knowledge for practice and improvement of performance

### **THEORY SYLLABUS (30 HOURS)**

#### **UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Kabaddi Court

#### **UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

#### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Kabaddi

#### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Kabaddi performance

#### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Kabaddi

#### **SUGGESTED READINGS**

1. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
2. Kumar,Dharmander.(2018).KabaddiandIt’sPlayingTechniques. Writers Choice, NewDelhi.
3. Mishra,S.C.(2007).TeachYourselfKabaddi.SportsPublications,NewDelhi.
4. Singh,Hardayal.(1919).ScienceofSportsTraining.DVSPublication,N.Delhi.
5. Syal,M.(2004).Kabaddi Teaching.PernaParkashan,NewDelhi.
6. VanaikA.(2017).Officiating and Coaching,FriendsPublication.NewDelhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**SEMESTER- IV**  
**BSc-PE-DSE-2(4)-211: KHO-KHO**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-2(4)-211: KHO-KHO</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

1. Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
2. Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
3. Acquire various skills of sports
4. Evaluate fitness and skill and player's performance.
5. Provide technical practice
6. Understand fitness components and its forms.
7. Inculcate Knowledge for practice and improvement of performance
8. Mark and maintain Court/field.

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Kho Kho ground

**UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.



### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Kho Kho

### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Kho Kho performance

### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Kho-Kho

### **SUGGESTED READINGS**

1. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
2. Chakrabarty G (2002). Kho-Kho Aveloken. Khel Sahitya Kendra. Delhi.
3. Singh, Hardayal. (1919). Science of Sports Training. DVSPublication, N. Delhi.
4. Vanaik A. (2005). Playfield Manual, Friends Publication. New Delhi
5. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

## SEMESTER- IV

### BSc-PE-DSE-2(4)-212: VOLLEYBALL

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-2(4)-212: VOLLEYBALL	4	2	0	2	Class XII pass	Nil

**Learning Objective:-**The Students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcomes :** At the end of the course the student will be able to-

- Understand Historical Development, Organizational Structure and Playfield Technology of the respective sport/game.
- Interpret the rules of game as well as game knowledge in the areas of psychological basis of Warming up and technical aspects of coaching.
- Acquire various skills of sports
- Evaluate fitness and skill and player's performance.
- Provide technical practice
- Understand fitness components and its forms.
- Inculcate Knowledge for practice and improvement of performance

#### **THEORY SYLLABUS (30 HOURS)**

##### **UNIT-I (08 HOURS)**

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National, and International Level)
- Introduction to Volleyball Court

##### **UNIT-II (08 HOURS)**

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

##### **UNIT-III (07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Volleyball

#### **UNIT-IV (07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Volleyball performance

#### **PRACTICAL SYLLABUS - (60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Volley Ball

#### **SUGGESTED READINGS**

- American Volleyball Coaches Association (2005). Volleyball: Skills & Drills. Human Kinetics, USA.
  - Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
- Kenny,B.andGregory,C.(2006).Volleyball:StepstoSuccess.HumanKinetics,USA.
- Scates,A.andLinn,M.(2002).CompleteConditioningforVolleyball.HumanKinetics,USA.
- Shondell,D.andReynaud,C.(2002).TheVolleyballCoachingBible.HumanKinetics,USA.
- Singh,Hardayal.(1919).ScienceofSportsTraining.DVSPublication,N.Delhi.
- TheNationalAllianceforYouth.Sports(2009).CoachingVolleyballFor Dummies Publishers, USA.
- Volleyball ,USA(2009).Volleyball: Systems and Strategies. Human Kinetics,USA.
- Vanaik A.(2017).Officiating and Coaching, Friends Publication. New Delhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

## SEMESTER- IV

### BSc-PE-DSE-2(4)-213: YOGA

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-2(4)-213: YOGA	4	2	0	2	Class XII pass	Nil

**Learning Objective:** -The Students will acquire knowledge and understanding of a specific sport in which an individual wish to excel.

**Learning Outcomes:** After completing the course, the students will:

- 1.Understand Origin of yoga, definition and scope of yoga, limitations and misconceptions, importance of yoga in physical education and other fields
- 2.Learn about the prayer, perform Asanas, pranayama, shatkarma, bandha.
- 3.Treat Disease through yoga therapy- Asthma, high & low B.P, diabetes, obesity, heart disease, insomnia, arthritis, backache & female disease.
- 4.Apply Yoga-nidra/relaxation techniques
- 5.Understand Diet & constitution, components of nutrition, water, natural diet, balanced diet, fasting-its benefits, types & preparation.

### THEORY SYLLABUS (30 HOURS)

#### UNIT-I (07 hrs lectures)

- Origin of yoga, definition, and scope of yoga, limitations, and misconceptions of Yoga
- Importance of yoga in physical education and other fields
- Yoga asana competition at: - State, National, International, SGFI, AIU, etc.

#### UNIT-II (07 hrs lectures)

- Philosophical aspects of Yoga-Pre-Vedic, Vedic period; Buddhism, Upanishad period, Jainism & tantra
- Qualifications, qualities, and responsibilities of a coach,
- Duties/responsibilities of technical official, Scoring system and judgment criteria,

- Protocols for referees, judges, and officials.

### **UNIT-III (09 hrs lectures)**

- Meaning, techniques, precautions & effects of the following:-
- Asanas: padmasana, vajrasana, sidhasana, paschimottanasa, halasana, sarvangasana, shalabhasana, ardhmatsyendrasana, bhujangasana, tadasana, vrikshasana, matsyasana, gomukhasana, ushtrasana, shavasana, makarasana, vrishchikasana, dhanurasana, purna matsyendrasana, chakrasana, ek pad sikandasana, bakasana, mayurasana, shirshasana
- Pranayama: anulom-vilom, bhasrika, suryabhedhen pranayama, sheetali, sheetkari, bhramari, ujjayi
- Shatkarma: neti, dhauti, nauli, basti, kunjali, kapal bhati, shankh prakshalana
- Bandhas: jalandhar, uddiyana, mool bandha

### **UNIT-IV (07 hrs lectures)**

- Disease-wise treatment through yoga therapy- Asthma, high & low B.P, diabetes, obesity, heart disease, insomnia, arthritis, backache & female disease
- Diet & Nutrition, components of nutrition, water, natural diet, balanced diet, fasting-its benefits, types & preparation, and the importance of vegetarianism in yogic diet.

### **PRACTICALSYLLABUS (60 HOURS)**

1. Prayer
2. Asanas, pranayama, shatkarma, bandha (as mentioned in theory)
3. Yoga-Nidra/relaxation techniques

### **SUGGESTED READINGS**

- Anand Omprakash (2001). Yog Dawra Kaya Kalp, Kanpur. Sewasth Sahitya Perkashan
- Iyengar, B.K.S. (1995). Light on Yoga : The Bible of Modern Yoga. Schocken Publishers, USA.
- Kaminoff, L. et al (2007). Yoga Anatomy. Human Kinetics, USA.
- Kirk, M. (2005). The Hatha Yoga Illustrated. Human Kinetics, USA.
- Sharma JP and Ganesh S(2007). Yog Kala Ek Prichya. Friends Publication. New Delhi

- Sharma J. P. (2007). Manav jeevan evam yoga. Friends Publication. New Delhi.
- Sharma Jai Prakash And Sehgal Madhu(2006). Yog-Shiksha. Friends Publication. Delhi.
- Sharma Jai Prakash and Rathore Bhupender Singh (2007). Yoga Ke Tatva. Friends Publication. Delhi
- Mukerji, A.P. (2010). The Doctorine and Practice of Yoga. General Books, LLC, New Delhi.
- Norton, W.W. (2010). Yoga for Osteoporosis : The Complete Guide. W.W. Norton & Company, USA.
- Sarin N (2003). Yoga Dawara Rogoon Ka Upchhar. Khel Sahitya Kendra
- Sri Swami Rama, (2001). Breathing. Rishikesh Sadhana Mandir Trust.
- Swami Ram (2000). Yoga& Married Life. Rishikesh Sadhana Mandir Trust
- Swami Swatma Ram: Patanjali Yoga Sutra
- Swami Veda Bharti (2000). Yoga Polity. Economy and Family. Rishikesh Sadhana Mandir Trust
- Text Book Hath Yoga Pradipika
- Text Book Patanjali Yoga Sutra
- Text Book Patanjali Yoga Sutra

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-III**  
**BSc-PE-DSE-2(4)-214: SWIMMING**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-2(4)-214: SWIMMING</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:** -The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcome:** -The student attains knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice.

1. A student will be able to learn about Historical Development, Organizational Structure and Playfield Technology of a sport/game.
2. A student will be able to understand and interpret the rules of the game as well as game knowledge in the areas of physiological basis of Warming up and technical aspects of coaching.
3. A student will be able to learn and acquire various skills of sports/games, gain knowledge about different techniques evaluation as well as the evaluation of player's performance.
4. A student will be learning about various fitness components and their forms. Further, the student will be able to practice and improve performance on the basis of knowledge gained in understanding various fitness components and their testing.

**THEORY SYLLABUS**

**(30 HOURS)**

**UNIT-I**

**(08 HOURS)**

- Introduction to Swimming game
- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)

**UNIT-II**

**(08 HOURS)**

- Rules and their interpretation

- Team Composition
- Basis of Warming up and cooling down and its effect

### **UNIT-III**

**(07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during and Post match coaching
- Basic skills and techniques of the skills
- Drills to improve skills in Swimming

### **UNIT-IV**

**(07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for swimming performance

### **PRACTICAL SYLLABUS -**

**(60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills in Swimming

### **SUGGESTED READINGS**

1. David J., Mathur M. (1994). "How to learn swimming in 30 days" UBS Publishers, New Delhi, India.
2. Jain. R. (2003). "Play and Learn Swimming" Khel Sahitya Kendra, New Delhi, India
3. Jain. D. (2003). "Swimming Skills & Rules" Khel Sahitya Kendra, New Delhi, India
4. Hardy, Colin (1987) "Handbook for the Teacher Of Swimming" Pelham books ltd., London (U.K)
5. Bompa O. Tudor and Halff G. Gregory. (2009) "Periodization Theory and Methodology of Training" Human kinetics. NY.
6. Thomas, David G., (2005). "Swimming STEPS TO SUCCESS" Human Kinetics, U.S.A
7. Singh, Hardayal. (1919). Science of Sports Training. DVS Publication, N. Delhi.
8. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**



## Semester-III

### BSc-PE-DSE-2(4)-215: WRESTLING

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-2(4)-215: WRESTLING	4	2	0	2	Class XII pass	Nil

**Learning Objective:** -The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcome:** -The student attains knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice.

1. A student will be able to learn about Historical Development, Organizational Structure and Playfield Technology of a sport/game.
2. A student will be able to understand and interpret the rules of the game as well as game knowledge in the areas of physiological basis of Warming up and technical aspects of coaching.
3. A student will be able to learn and acquire various skills of sports/games, gain knowledge about different techniques evaluation as well as the evaluation of player's performance.
4. A student will be learning about various fitness components and their forms. Further, the student will be able to practice and improve performance on the basis of knowledge gained in understanding various fitness components and their testing.

#### THEORY SYLLABUS (30 HOURS)

##### UNIT-I (08 HOURS)

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Wrestling Game

##### UNIT-II (08 HOURS)

- Rules and their interpretation
- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III**

**(07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Wrestling

### **UNIT-IV**

**(07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility.
- Importance of skill-related components for Wrestling performance

### **PRACTICAL SYLLABUS -**

**(60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills in Wrestling.

### **SUGGESTED READINGS**

1. Gable, D. (1999) “Coaching Wrestling Succesfully” Human Kinetics, U.S.A
2. Camaione D. & Tillman K. (1980) “Teaching & Coaching Wrestling A Scientific Approach” John Wiley & Sons. Inc., U.S.A.
3. Kumar N. (2005) “Play & Learn Wrestling” Khel Sahitya Kendra, New Delhi, India.
4. Patwardhan G. (2002) “Coaching Succesfully Wrestling” Sports Publication, Delhi.
5. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

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### Semester-III

#### BSc-PE-DSE-2(4)-216: TABLE TENNIS

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-2(4)-216: TABLE TENNIS	4	2	0	2	Class XII pass	Nil

**Learning Objective:** -The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel.

**Learning Outcome:** -The student attains knowledge, understanding, interpreting and analyzing proficiency in a game of one's choice.

1. A student will be able to gain knowledge concerning Historical Development, Organizational Structure and Playfield Technology of a sport/game.
2. A student will be able to understand and interpret the rules of the game as well as game knowledge in the areas of physiological basis of Warming up and technical aspects of coaching.
3. A student will be able to learn and acquire various skills of sports/games, gain knowledge about different techniques evaluation as well as the evaluation of player's performance.
4. A student will be learning about various fitness components and their forms. Further, the student will be able to practice and improve performance on the basis of knowledge gained in understanding various fitness components and their testing.

#### THEORY SYLLABUS (30 HOURS)

##### UNIT-I (08 HOURS)

- Historical Development and Modern Trends (National and International Level)
- Organizational structure (State, National and International Level)
- Introduction to Table Tennis Game

##### UNIT-II (08 HOURS)

- Rules and their interpretation

- Team Composition
- Basis of Warming up and cooling down and its effect.

### **UNIT-III**

**(07 HOURS)**

- Techniques of Coaching – Pep talk, Pre, during, and Post match coaching.
- Basic skills and techniques of the skills
- Drills to improve skills in Table Tennis

### **UNIT-IV**

**(07 HOURS)**

- Introduction to Physical Fitness components: Strength, Speed, Endurance, Coordinative Abilities and Flexibility
- Importance of skill-related components for Table Tennis performance

### **PRACTICAL SYLLABUS -**

**(60 HOURS)**

- Learning and demonstrating various skills/techniques of sports.
- Drills to improve skills of Table Tennis

### **SUGGESTED READINGS**

1. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
2. Jain D. (2001) “ Teaching& Coaching Table Tennis” Khel Sahitya Kendra, Delhi.
3. Burn B. (1979) “ The Science of Table Tennis” S. Chand & Company Ltd., N. Delhi.
4. Singh, Hardayal. (1919). Science of Sports Training. DVS Publication, N. Delhi.
5. Jain D. (2003) “Table Tennis skills & Rules” Khel Sahitya Kendra, N. Delhi.
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

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**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**  
**UGCF: B.SC. PHYSICAL EDUCATION, HEALTH EDUCATION AND SPORTS (HONS.) NEP-2020**

**B.Sc (PE, HE & S) Hons.**

<b>SEMESTER</b>	<b>COURSE</b>	<b>CONTENT /CREDITS *</b>
<b>V</b>	<b>Discipline Specific Course (DSC)</b>	<b>DSC-13 (4): Organization &amp; Administration in Physical Education &amp; Sports</b>  <b>DSC -14 (4): Fundamentals of Sports Nutrition</b>  <b>DSC -15 (4): Athlete Care &amp; Rehabilitation</b>
	<b>Discipline Specific Elective (DSE)</b>	<b>CHOOSE ONE FROM POOL OF COURSES</b>  <b>DSE-3(4)-301: Game of Specialization Game - I (Select any one game from the games already studied in Sem I to IV as DSC/DSE Game)</b>  <b>DSE-3(4)-302: Sports Journalism</b>  <b>DSE -3(4) -303: Sports Facility Planning and Management</b>
	<b>Generic Elective (GE)</b>	<b>Choose one from a pool of courses (of other Departments) GE-5 (4)</b>
	<b>Ability Enhancement Course (AEC)</b>	<b>NONE</b>
	<b>Skill Enhancement Course (SEC)</b> <b>OR</b> <b>Internship/Apprenticeship/Project (2)</b>	<b>Choose one SEC or Internship/ Apprenticeship/ Project/ Community Outreach (2)</b>
	<b>Value Addition Course (VAC)</b>	<b>NONE</b>
		<b>Total Credits= 22</b>

\* (FIGURE IN BRACKETS DENOTE CREDITS)

# **SEMESTER V**

**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**

**UNIVERSITY OF DELHI**

**B.Sc. (Hons.) (Physical Education, Health Education and Sports)**

**SEMESTER- V**

**BSc-PE-DSC-13(4): ORGANISATION AND ADMINISTRATION IN PHYSICAL EDUCATION AND SPORTS**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSC-13(4): ORGANISATION AND ADMINISTRATION IN PHYSICAL EDUCATION AND SPORTS</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:** -The learner will acquire knowledge and understanding with applications and skills in **Organisation and Administration in Physical Education and Sports** in real-life situations.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Understand the scope and importance of Organisation and Administration in physical education and sports,
2. Follow the responsibilities of the Physical Education teacher and pupil leader.
3. Acquire knowledge about Components of Organizations and Administration.
4. Create a budget by acquiring knowledge of **budget-making**
5. Maintain Records and Registers of Budgets
6. Manage Sports Facilities & Equipment
7. Organize Competitions, extra-murals, intra-murals, and athletic meets

**THEORY SYLLABUS (45 hours)**

**Unit – I: Introduction to Organisation and Administration & Organisation Structure in Sports (15 Hours)**

- 1.1 Meaning, Scope, and importance of Organisation and Administration in physical education and sports
- 1.2 Qualification and Responsibilities of Physical Education teacher and pupil leader
- 1.3 Analysis of Sports organisations (Local, National, International)
- 1.4 Governing Bodies and Their Functions

1.5 Club structure and affiliation & Steps to Develop Academy/Club/ Coaching Centers.

### **UNIT- II: Budget Making and Maintenance of Records and Registers (10 Hours)**

2.1 Budget: Meaning, Importance of Budget Making,

2.2 Criteria of a good Budget, Sources of Income, Expenditure, Preparation of Budget for Sports Organizations.

2.3 Records and Registers: Maintenance of attendance Register, stock register, cash register, and physical efficiency record.

### **UNIT-III: Management of Sports Facilities & Equipment Management (10 Hours)**

3.1 Facilities and equipment management: Types of facilities, infrastructure-indoor, outdoor

3.2 Care of school building, Gymnasium, swimming pool, Play fields, Playgrounds

3.3 Equipment: Determining supply and equipment; Guidelines for Purchasing supply of equipment; Store Keeping; Care and maintenance.

### **UNIT-IV: Competition Organisation (10 Hours)**

4.1 Importance and Types of Tournaments

4.2 Organization Structure of Athletic Meet

4.3 Sports Event- Intramurals & Extramural Tournament planning

### **SUGGESTED READING**

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic program: A Managerial Approach. New York: Prentice Hall Inc.

2. Bucher, C. A. (1983). Administration of Physical Education and Athletic program. St. Louis: The C.V.

3. Hosby Co. Kozman, H.C. Cassidy, R. & Jackson, C. (1960). Methods in Physical Education. London: W.B. Saunders Co. Pandey, L.K. (1977).

4. Gyanodayal Press. Tirunarayanan, C. & Hariharan, S. (1969). Organization & administration of Physical Education. Madras:

5. Voltmer, E. F. & Esslinger, A. A. (1979). Methods in Physical Education. Karaikudi: South India Press.

6. The organization and administration of Physical Education. New York: Prentice Hall Inc

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**



## Semester-V

### B.Sc-PE-DSC 14(4): FUNDAMENTALS OF SPORTS NUTRITION

Course title& Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
B.Sc-PE-DSC 14(4): FUNDAMENTALS OF SPORTS NUTRITION	4	3	1	0	Class XII pass	NIL

**Learning Outcome:** - The student would be able to apply the knowledge of nutrition in day-to-day life and sports and training. Such core knowledge and skills help to create a strong foundation to engage human subjects of all ages, sexes, and abilities.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Understand nutrition & nutrients, the significance of their sources & function requirements in normal health conditions
2. Acquire knowledge about Energy metabolism, RMR, energy expended on physical activity, and TEF.
3. Understand the Concept of a balanced diet, dietary and nutritional requirements for children, adolescents, adult men and women, and elderly
4. Consider Nutrition for sports/exercising person during training, pre-event meal, during event and post-event meal.
5. Understand Fluid requirements in sports
6. Understand eating disorders in Sports Persons, Female athletic triad, and Sports anemia
7. Identify Nutrients as ergogenic aids for sports and exercise, Supplements, and their role in sports.

### THEORY SYLLABUS: 45 Credits

#### UNIT-I (12 Hours)

1.1 Introduction to basic concepts in nutrition-Nutrients of physiological significance their sources & functions,

1.2 Basic food groups, Concept of a balanced diet.

1.3 Nutritional requirements- Introduction to Estimated Energy Requirements (EAR) and Recommended Dietary Allowances for Indians (RDA). Concept of Tolerable Upper Limit.

1.4 Basic Dietary Guidelines for Indians for good health and prevention of diseases.

## **UNIT II (7Hours)**

2.1 Energy Metabolism- Definition, catabolic and anabolic reactions.

2.2 Energy components of Energy Expenditure-BMR, RMR, Energy Expended on Physical Activity, and TEF.

2.3 Energy requirements of specific groups, Energy cost of activities, Energy systems used in different sports, Energy substrate for activities of different intensity and duration;

2.4 Concept of energy balance in maintaining body weight.

## **UNIT-III (12 Hours)**

3.1 General and specific dietary guidelines in planning meals for children, adolescents, adult men and women and the elderly.

3.2 Nutritional and dietary modifications for body weight and body composition management

3.2 Nutritional considerations for sports/exercising person(endurance and strength sports/exercise training) during training, and competition including pre-event meals, during the event, and post-event meal.

## **UNIT-IV (14Hours)**

4.1 Importance of hydration and fluid balance in physical activity and sports, Symptoms, and prevention of dehydration, Types of sports drinks - Hypotonic, Isotonic, and Hypertonic drinks.

4.2 Nutrition-related problems in sports persons- Eating disorders, Sports anaemia, Female athletic triad (FAT) Relative energy deficiency syndrome (RED-S) and

4.3 Nutrients as supplements and ergogenic aids for sports and exercise

## **SUGGESTED READINGS**

1. Antoni, J. et al, Editors (2008). Essentials of Sports Nutrition and Supplements. Humana Press, USA.
2. Benardot, D. (2005). Advanced Sports Nutrition. Human Kinetics, USA.
3. Clark, N. (2008). Sports Nutrition. 4th Ed. Human Kinetics, USA.
4. Dietary Guidelines for Indians (2024). ICMR/NIN Publication
5. Eberle, S.G. (2007). Endurance Sports Nutrition. Human Kinetics, USA.
6. Finic HH et al (2006), Practical Applications in Sports Nutrition J & B Publisher, USA.
7. ILSI- India, NIN, SAI. (2007) Nutrition and hydration Guidelines for excellence in sports performance;
8. Lal PR (2009) Handbook of Sports Nutrition, Friends Publication

9. R, Chadha *and* P. Mathur.(2015) Nutrition: A Lifecycle Approach. ISBN-13: 978-8125059301. The Orient Blackswan. Co.
10. McArdle, W.d. & Katch, V.L. (2008). Sports and Exercise Nutrition. 3rd Ed. Lippincott Williams and Wilkins, USA.
11. Meyer, D.E.L. (2006). Vegetarian Sports Nutrition. Human Kinetics Publishers, USA.
12. Whitney E. and Rolfes S.R. (2005). Understanding Nutrition. Thomson Wadsworth. Belmont. California. U.S.A

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## SEMESTER-V

### BSc-PE-DSC-15 (4): ATHLETE CARE AND REHABILITATION

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Prerequisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSC-15 (4): ATHLETE CARE AND REHABILITATION	4	3	0	1	Class XII pass	NIL

**Learning Objective:-**To acquaint students with the knowledge of Athletic Care and Rehabilitation application.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Apply training principles in developing various exercise programs and improving sports performances.
2. Understand the concept of ACR/SM.
3. Understand the Principles of care and rehabilitation and the Role of physical educators in athletic care and Rehabilitation
4. Learn about sports injuries
5. Classify sports injuries with their causes and reasons
6. Prevent And Manage Sports Injuries
7. Identify the Risk Factors of Sports Injuries
8. Rehabilitate and provide First Aid and Safety Procedures in Playfield and Gym
9. Manage of sports specific injuries
10. Prevent and Manage Health issues in different climatic conditions.
11. Apply CPR (Cardio Pulmonary Resuscitation) and First Aid for Soft tissue, bone & joint injuries
12. Apply Exercise therapy in rehabilitation

### **THEORY SYLLABUS: 45 HOURS**

#### **UNIT-I: INTRODUCTION (9 HOURS)**

1.1 Meaning and definition of related terminologies- Athlete, fitness, wellness, performance, Care, Rehabilitation, Sports, Medicine, Sports Medicine

1.2 Aim, objectives and scope of ACR/SM

- 1.3 Principles of care and rehabilitation
- 1.4 Role of physical educators in athletic care and Rehabilitation

## **UNIT- II: SPORTS INJURIES (8 HOURS)**

- 2.1 Introduction, meaning and definition
- 2.2 Various classifications of sports injuries
- 2.3 Causes and Reasons of Sports Injuries

## **UNIT-III PREVENTION AND MANAGEMENT OF SPORTS INJURIES (10 HOURS)**

- 3.1 Importance of Prevention of Sports Injuries
- 3.2 Identification of Risk Factors of Sports Injuries
- 3.3 Steps for Preventing Sports Injuries – Training Strategies and Equipment Recommendations
- 3.4 Introduction to Rehabilitation Modalities and First Aid. Exercise therapy in rehabilitation
- 3.5 Safety Procedures in Playfield and Gym

## **UNIT- IV MANAGEMENT OF SPORTS-SPECIFIC INJURIES**

- 4.1 Sports-specific injuries- acute and chronic, with special emphasis on the specific risk factors, prevention, and management of various sporting events-
  - a. Individual events: Field & Track Events
  - b. Team events: Hockey, Cricket, and Football
  - c. Combat sports
  - d. Water sports
- 4.2 Prevention and management of Health issues in different climatic conditions: Heat-related injuries – Heat stroke, Heat exhaustion & cold related injuries – Frostbite – Hypothermia – Altitude Sickness.

## **PRACTICALS (30 HOURS)**

CPR (Cardio Pulmonary Resuscitation) and First Aid for Soft tissue, bone & joint injuries

- 1. Therapeutic Modalities, Principles, and Equipment used for
  - Cryotherapy
  - Thermotherapy
  - Electrotherapy
  - Hydrotherapy
  - Massage

2. Exercise therapy
  - Isometric exercise
  - Isotonic exercise

#### **SUGGESTED READINGS-**

- Jain, Rachna, (2002) Sports Medicine, New Delhi: Khel Sahitya Kendra,.
- Vijay Ed., (2001) Hand book of Sports Medicine, Delhi: Friends Pub.
- Shaw, D. (2021). Athletic care and rehabilitation. Friends publications.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

### **SEMESTER-V**

#### **DSE-3(4):GAME OF SPECIALIZATION I**

(Select any one game from the games already studied in Sem I to IV as DSC/DSE Game)

### **SEMESTER-V**

#### **BSc-PE-DSE-3(4)-301 (i):ATHLETICS**

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-3(4)-301 (i): ATHLETICS</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Objectives:** - The learner will be able to use the knowledge of athletics on the ground and will have a command of the basic and advanced rules and regulations of marking the track and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Marking, constructing, and maintaining Track & Field,
2. Prepare technically Focused Athletic Events
3. Train children, beginners, intermediate players(advanced sportspersons) seniors (high performance sportspersons)
4. Apply Safety measures and prevent injuries
5. Manage injuries' Causes
6. Rehabilitate and massage athletes
7. Organize athletics meet
8. Identify the classification and components of nutrition and energy requirements of athletes in specified events.

#### **THEORY SYLLABUS (30 HOURS)**

## **UNIT-I TRAINING AND TECHNICAL PREPARATION FOR SPECIFIED ATHLETIC EVENTS (8 HOURS)**

- 1.1 Technical preparation
- 1.2 Marking, construction, and maintenance of Track & Field
- 1.3 Physical, physiological, psychological and sociological characteristics of athletes
- 1.4 Technical Preparation for Focused Athletic Events, Required motor abilities and their technical preparation, Technical and tactical preparation, Physical, physiological, psychological and sociological characteristics of athletes

## **UNIT-II SYSTEMATIZATION OF TRAINING PROCESS (8 HOURS)**

- 2.1 General training for children, Training for beginners, Training for intermediate players (advanced sportspersons)
- 2.2 Training for seniors (high-performance sportspersons)
- 2.3 Safety measures and prevention of injuries, Management of Injuries
- 2.4 Causes and remedies of injuries
- 2.5 Physiotherapy, rehabilitation, and massage

## **UNIT-III ORGANIZATION OF THE ATHLETICS MEET (7 HOURS)**

- 3.1 Structure and organization of the athletics meet
- 3.2 Budgeting, purchase of equipment
- 3.3 Preparation, execution, and conclusion of the respective events
- 3.4 Protocols and Ceremonies

## **UNIT-IV SPORTS NUTRITION (7 HOURS)**

- 4.1 Meaning, definition, classification, and components of nutrition
- 4.2 Energy requirements of athletes in specified events
- 4.3 Nutritional requirements of athletes: pre-, during, and post-competition phases
- 4.4 Electrolytes – sports drinks, minerals, and supplements: pre-, during, and post-competition

## **PRACTICALS (60 HOURS)**

1. Identify and implementation warming up cooling down exercises
2. Supplementary exercises for specified events, practice, and training of selected events
3. Propose to organize an athletic meet

## **REFERENCES**

- Renwick, G.R., (2001) Play Better Athletics, Delhi: Sports Pub.,.
- Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and



Methodology of Training” Human kinetics. NY.

- Handbook-Rules and Regulation. International Athletic Federation (2010).
- Kumar, Pardeep. (2008). Historical Development of Track & Field. Friends Publication. New Delhi
- Maughan, R. and Gluson, M. (2004). The Biomechanical Basics of Athletic Performance. Oxford University Press, U.K.
- Vanaika. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester V**  
**BSc-PE-DSE-3 (4)-301 (ii): BADMINTON**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-3(4)-301 (ii): BADMINTON</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Outcome:** - The learner will be able to use badminton knowledge on the ground and have a command of the basic and advanced rules and regulations of marking the court and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Marking, constructing and maintaining Badminton court,
2. Officiate and Coach with an understanding of Duties/responsibilities
3. Identifies Protocols of referees, judges, umpires, Roles of sports psychologists, sports physiotherapists, and fitness trainers
4. Train children, beginners, intermediate players (advanced sportspersons) seniors (high-performance sportspersons)
5. Apply Safety measures and prevent injuries
6. Manage injuries' Causes
7. Rehabilitate and massage athletes
8. Organize Competitions
9. Identify classification and components of nutrition and energy requirements of athletes in specified events
10. Train motor components through technical preparation

### **THEORY SYLLABUS (30 HOURS)**

#### **UNIT-I TECHNICAL PREPARATION FOR BADMINTON (8 HOURS)**

- 1.1 Training of motor components
- 1.2 Technical preparation – reflexes, perceptual sense, neuro-muscular coordination
- 1.3 Construction and maintenance of badminton court, equipment etc.
- 1.4 Physical, physiological, and Psychological preparation
- 1.5 Officiating and Coaching -Duties/responsibilities, qualifications, and qualities of a coach, Philosophy of coaching, Qualifications, and responsibilities/functions of technical officials, Protocols of referees, judges, umpires, Role of sports psychologists, sports physiotherapists and fitness trainers

## **UNIT-II SYSTEMATIZATION OF TRAINING PROCESS (8 HOURS)**

- 2.1 Systematizing training process for badminton players – general warming-up, specific warming-up and cooling-down
- 2.2 Supplementary exercises, basic skills, weight-training and circuit-training
- 2.3 Training for beginners, Training for intermediate players - advanced sportspersons, Training for seniors - high-performance sportspersons.
- 2.4 Prevention of injuries and Safety measures.

## **UNIT-III ORGANISATION OF THE COMPETITION (7 HOURS)**

- 3.1 Planning for the Competition
- 3.2 Selection of men, material and management
- 3.3 Concluding the competition – submission of accounts, preparing a report
- 3.4 Protocols and Ceremonies

## **UNIT-IV DIET, NUTRITION AND SPORTS PERFORMANCE (7 HOURS)**

- 4.1 Meaning, definition, classification, and components of nutrition
- 4.2 Energy requirements of badminton players
- 4.3 Nutritional requirements of badminton players: pre-, during, and post-competition phases

## **PRACTICALS (60 HOURS)**

- 1. Demonstration of skills
- 2. Training for footwork
- 3. Shadow practice and pressure training, planning for competition, organization of competition/seminar/workshop.

## **SUGGESTED READINGS**

- Ashok Kumar, (2003) Badminton, New Delhi Discovery,.
  - Narang, P. (2005), Play and Learn Badminton, Khel Sahitaya Kendra,.
  - Singh, M.K., (2006) A to Z Badminton, New Delhi, Friends Pub.,.
  - Singh, M.K., Comprehensive Badminton, N.D. Friends Pub., 2007.
  - Brahms Bernd-Voler. (2010). Badminton Handbook. Mayer & Mayer Sports: UK.
- Unit-II,III&IV-p-9-14.
- Grice, T. (2007). Badminton: Steps to Success. 2<sup>nd</sup> Ed. Human Kinetics, USA.
  - Gupta R. Kumar P. and Tyagi S.(2008). Textbook on Teaching Skill and Prowess (Part-I&II). Friends Publication. New Delhi.
  - MK. (2007). Comprehensive Badminton. Friends Pub. New Delhi.

- Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-V**  
**BSc-PE-DSE-3 (4)-301 (iii):BASKETBALL**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Prerequisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-3 (4)301 (iii): BASKETBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Outcome:** - The learner will be able to use the knowledge of basketball in the ground and will have a command of the basic and advanced rules and regulations of marking the court and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Understand Prerequisites of preparation and training
3. Marking, construct and maintain Basketball court,
4. Officiate and Coach with understanding of Duties/responsibilities
5. Identifies Protocols of referees, judges, umpires, Role of sports psychologists, sports physiotherapists, and fitness trainers
6. Train children, beginners, intermediate players (advanced sportspersons) seniors (high performance sportspersons)
7. Organize Competitions
8. Train motor components through technical preparation
9. Conduct Tests (AAHPERD Youth Fitness Test, AAHPERD Health-related Fitness Test, Fleishman Physical Fitness Test, National Physical Efficiency Test, Indiana motor Fitness Test, Skill Tests – AAHPERD, Johnson Basketball Test Battery, SAI Test Battery, Knox Test Evaluation of team performance) Observe techniques, statistical techniques and scouting charts.

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I PERFORMANCE ASSESSMENT OF ATHLETES (8 HOURS)**

- 1.1 Organization-Selection of a team and conduct of a camp, Playfield technology- planning, construction and maintenance of a basketball court
- 1.2 Conduct a tournament, Short-term and long-term planning for the organization of a competition
- 1.3 Report writing, photography, analysis, and commentary
- 1.4 Evaluation of players' performance during matches, Video analysis of skills and

techniques, Assessment of prospective opponents

## **UNIT-II PREPARATION AND TRAINING (8 HOURS)**

- 2.1 Prerequisites of preparation and training
- 2.2 Preparation, pre-contact movement, contact Teaching progression, Coaching points, Drills for skill development (any five), Defense patterns and drills (zone and man - man drill), Lead up games for beginners in basketball, Teaching of basketball skills - preparing a lesson plan and tactical application.
- 2.3 Development of motor components with specific reference to basketball, Specific training methods for different positions
- 2.4 Development of basketball-specific fitness components

## **UNIT-III ORGANIZATION (7 HOURS)**

- 3.1 Selection of a team and conduct of camps.
- 3.2 Playfield technology-planning, construction, and maintenance of Basketball Court.
- 3.3 Conduct of a Tournament
- 3.4 Short-Term and Long-Term Planning for organization of a competition.
- 3.5 Report writing, photography, analysis, and commentary.

## **UNIT-IV MEASUREMENT AND EVALUATION (7 HOURS)**

- 4.1 Fitness tests- AAHPERD Youth Fitness Test, AAHPERD Health-related Fitness Test, Fleishman Physical Fitness Test, National Physical Efficiency Test, Indiana motor Fitness Test
- 4.2 Skill Tests – AAHPERDD, Johnson Basketball Test Battery, SAI Test Battery, Knox Test
- 4.3 Evaluation of team performance – observation techniques, statistical techniques, scouting charts

## **PRACTICAL (60 HOURS)**

- 1. General and specific warm-up
- 2. Teaching fundamental skills
- 3. Drills to develop fundamental skills
- 4. Drills for defense and offense system
- 5. Preparing and taking lesson plans for above
- 6. One-on-one measurement, development, and evaluation of motor components
- 7. Preparing training load and schedule for basketball players
- 8. Executing: Fitness test, Knowledge test, Specific skill test
- 9. Organizing Basketball tournaments.

## **SUGGESTED READINGS**

1. Jain, (2003) Naveen Play and Learn Basket Ball, Khel Sahitya Kendra, New Delhi-
2. Sharma O.P. (2003) Basket Ball Skills and Rules, Khel Sahitya Kendra Delhi-
3. Thani, Yograj, (2002) Coaching Successfully Basket Ball, Sports Publisher, Delhi-.
4. Drewett, J. (2007). How to Improve at Basketball. Crab Tree Publishing Co., USA.
5. Wilmore & Costill (2004). Physiology of Sports & Exercise. Human Kinetics, US.
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester V**  
**BSc-PE-DSE-3 (4)-301 (iv):CRICKET**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Prerequisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-3 (4)-301 (iv): CRICKET</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>ClassXII pass</b>	<b>NIL</b>

**Learning Outcome:** - The learner will be able to use the knowledge of cricket in the ground and will have a command of the basic and advanced rules and regulations of marking the ground and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Analyze Performance and Videos
3. Understand the Prerequisites of preparation and training
4. Marking, construct and maintain Fields,
5. Officiate and Coach with an understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, umpires, Roles of sports psychologists, sports physiotherapists, and fitness trainers
7. Train children, beginners, intermediate players (advanced sportspersons) seniors (high-performance sportspersons)
8. Organize Competitions
9. Train motor components through technical preparation
10. Conduct Tests (AAHPERD Youth Fitness Test, AAHPHER Health Related Fitness Test, Fleishman Physical Fitness Test, National Physical Efficiency Test, Indiana motor Fitness Test Skill tests – beep test, running between the wickets, different kinds of catches and Throw Evaluation of team performance) observe techniques, statistical techniques, and scouting charts.

### **THEORY SYLLABUS (30 HOURS)**

#### **UNIT-I PERFORMANCE-RELATED ASSESSMENT (8 HOURS)**

- 1.1 Evaluation of players' performance during matches
- 1.2 Video analysis of skills and techniques, the importance of a third umpire
- 1.3 Assessment of Prospective Opponents



## **UNIT-II PREPARATION AND TRAINING (8 HOURS)**

- 2.1 Prerequisites of preparation and training Theory of cricket training process
- 2.2 Lead-up games for beginners in cricket, Teaching of cricket skills - preparing a lesson plan
- 2.3 Development of motor components with specific reference to cricket, Specific training methods for different positions (slip catching, close fielding, fast bowling)
- 2.4 Development of cricket-specific fitness components

## **UNIT-III ORGANIZATION (7 HOURS)**

- 3.1 Selection of a team and conduct of a camp
- 3.2 Short-term and long-term planning Playfield technology - planning, construction and maintenance of the cricket field
- 3.3 Conduct of a Tournament, short-term and long-term planning for the organization of a competition
- 3.4 Report writing, photography, analysis and commentary

## **UNIT-IV MEASUREMENT AND EVALUATION (7 HOURS)**

- 4.1 Fitness tests - Fitness tests- AAHPERD Youth Fitness Test, AAHPERD Health Related Fitness Test, Fleishman Physical fitness test, National Physical Efficiency Test, Indiana Motor Fitness Test
- 4.2 Skill tests – beep test, running between the wickets, different kinds of catches and throw
- 4.3 Evaluation of team performance – observation techniques, statistical techniques, scouting charts

## **PRACTICALS (60 HOURS)**

- 1. General & specific warming-up
- 2. Training means for development of different components of physical & motor fitness
  - (a) Speed
  - (b) Strength
  - (c) Endurance
  - (d) Flexibility
  - (e) Coordination
  - (f) Core stability
  - (g) Agility
- 3. Game officiating
- 4. Advancement of different techniques, organizing intramurals in the institution, organizing camping, scouting & giving commentary, coaching lesson-5 (five) Internal lessons.

## **SUGGESTED READINGS**

1. Jain, R., (2003) Play and Learn Cricket, New Delhi: K.S.K.,
2. Kutty, S. K., (2003) Fielding Drills in Cricket, New Delhi: K.S.K.,
3. Rachna, (2002) Coaching Successfully: Cricket, Delhi: Sports,.
4. Rachna, Jain, (2005) Play & Learn Cricket, Khel Sahitya Kendra,.
5. Sharma, Prahlad, (2003) Cricket, Jaipur: Shyam Prakashan,.
6. Boycott, G. (2010). Play Cricket the Right Way. Great Northern Books Limited, U.K.
7. Cricket (2008). Sports Skills: Cricket Fielding (Know the Game). A & C Black Publishers.
8. Hobbs, J. (2008). The Game of Cricket As it should be played. Jepson Press, USA.
9. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-V**  
**BSc-PE-DSE-3 (4)-301 (v):FOOTBALL**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-3 (4)-301 (v): FOOTBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Outcome:** - The learner will be able to use the knowledge of Football in the ground and will have a command of the basic and advanced rules and regulations of marking the ground and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Analyze Performance and Videos
3. Understand Prerequisites of preparation and training
4. Marking, constructing and maintain Fields,
5. Officiate and Coach with an understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, umpires, Roles of sports psychologists, sports physiotherapists, and fitness trainers
7. Organize Competitions
8. Train motor components through technical preparation
9. Conduct Tests (AAHPERD Youth Fitness Test, Fleishman Physical Fitness test, Indiana motor Fitness Test Skill tests – McDonald test, Mitchell – SAI Football Test.
10. Evaluate of team performance Observe techniques, statistical techniques, and scouting charts.

**UNIT-I RULES AND THEIR INTERPRETATIONS (8 HOURS)**

- 1.1 Rules and Regulations in Football
- 1.2 Officiating- Evaluation of player's performance during matches, Video analysis of skills and techniques, Assessment of prospective opponents
- 1.2 Duties and responsibilities of officials
- 1.3 Mechanism of officiating and scoring

**UNIT-II PREPARATION AND TRAINING (8 HOURS)**

- 2.1 Basic skills and techniques
  - Preparation, pre-contact movement, contact

- Teaching Progression
- Coaching points
- Tactical application
- Drills for skill - development (any five)

2.2 The field defense – general characteristics, teaching progression, and coaching tips, position-specific and other defense drills, Lead - up games for beginners in football, Teaching football skill - preparing a lesson plan

2.3 Development of motor components with specific reference to football, Specific training methods for different positions

2.4 Development of football-specific fitness components

### **UNIT-III ORGANIZATION ( 7 HOURS)**

3.1 Organization-Selection of a team and conduct of a camp

3.2 Playfield technology - planning, construction, and maintenance of football field

3.3 Conduct of a tournament.

3.4 Short-term and long-term planning for the organization of a competition, Report writing.

3.5 photography, analysis, and commentary

### **UNIT-IV MEASUREMENT AND EVALUATION (7 HOURS)**

4.1 Fitness tests - AAHPERD Youth Fitness Test, Fleishman Physical Fitness Test, Indiana motor Fitness Test

4.2 Skill tests – McDonald test, Mitchell – SAI Football Test.

4.3 Evaluation of team performance – observation techniques, statistical techniques, scouting charts

### **PRACTICAL SYLLABUS (60 HOURS)**

#### **Advanced movements with the ball**

1. Kicking – basic action, requirement, classification and types of kicking
2. Receiving – with the feet, legs, inside the foot, outside and sole, thigh, stomach, abdomen and chest
3. Heading – types of heading, surface of impact, proper movements
4. Dribbling and shooting– types of skills
5. Goal keeping – receiving the ball on the floor and in the air, diving skills, punching the ball
6. Applied tactics of defense – positioning by a defender, defensive attacker, interchanging of position
7. Attacking tactics- shooting and heading at goal, place changing, special method-attack with two center forward
8. Refining of skills

- Kicking
  - Receiving
  - Heading
  - Dribbling
  - Tackling
  - Goalkeeping
- 9 Taking advantage of offside rule - attack and defense
- 10 Match officiating
- Referee
  - Linesmen
  - Table officials
  - Play field preparation guide/organizer

### **SUGGESTED READINGS**

1. N. Kumar, (2003) Play and Learn Football, New Delhi: K.S.K.,.
2. Sharma, O.P.,(2 001) Teaching and Coaching –Football, Delhi: Khel S.K.,.
3. Thani, Yograj, (2002) Coaching Successfully Football, New Delhi: K.S.K.,.
4. Carling, C., Williams, M. and Reilling, T. (2006). Handbook of Soccer MatchAnalysis: A Systematic Approach to Improving Performance. Routledge Publishers,USA.
5. Long, H. and Czarnecki, J. (2007). Football for Dummies. For Dummies Publisher, USA.Developing Strength, Speed and Endurance. Routledge Publisher, USA.
6. Reilly, T., and J.C.D. Arau (2008). Science and Football V: The Proceedings of the5th World Congress on Sports Science and Football, Volume 5.
7. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-V**  
**BSc-PE-DSE-3 (4)-301 (vi): GYMNASTICS**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Prerequisite of the course (If any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-3 (4)-301 (vi): GYMNASTICS</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Outcome:** - The learner will be able to use the knowledge of Gymnastics on the ground and have a command of the basic and advanced rules and regulations and conduct a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Analyze Performance and Videos
3. Understand Prerequisites of preparation and training
4. Marking, constructing, and maintain court,
5. Officiate and Coach with an understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, umpires, Roles of sports psychologists, sports physiotherapists, and fitness trainers
7. Train children, beginners, intermediate players (advanced sportspersons) seniors (high-performance sportspersons)
8. Organize Competitions
9. Train motor components through technical preparation
10. Support techniques and their methods of Security
11. Understand Rhythmic gymnastics and Trampoline gymnastics

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I PRE-REQUISITES OF A GOOD GYMNASTICS COACH AND A GOOD GYMNAST (8 HOURS)**

- 1.1 Gymnastics coach
  - a. Qualifications, qualities, and abilities
  - b. Personality profiles of a gymnastics coach

## 1.2 Gymnast

- a. Anthropometrical demands (physique, body composition, somatotypes of men and women gymnasts)
- b. Conditional and coordinative abilities
- c. Psycho-social abilities

## 1.3 Knowing gymnastics terminology

- a. Methods of naming various gymnastics terms
- b. Names and definitions of some basic positions and movements
- c. Principles of teaching, coaching and training of gymnastics movements on apparatus

# **UNIT-II DEVELOPMENT, MEASUREMENT, AND EVALUATION OF motor ABILITIES (8 HOURS)**

## 2.1 Role of various motor abilities in gymnastics

## 2.2 Means and methods of developing general motor abilities and their evaluation

## 2.3 Means and methods of developing specific motor abilities and their evaluation

## 2.4 Schedule of Training and Planning For Competition - Training schedules

- Daily schedules
- Weekly schedules
- Monthly schedules

## 2.5 Planning for Competition

- Meaning and concept
- Preparation for the competition schedule
- Order of events
- Sequence of gymnast

# **UNIT-III SAFETY MEASURES IN GYMNASTICS (7 HOURS)**

## 3.1 Supporting techniques and their methods

## 3.2 Security – means and methods

## 3.3 Self-security methods

## 3.4 Causes, prevention, and remedies of injuries in gymnastics

# **UNIT-IV THEORY OF VARIOUS FORMS OF GYMNASTICS (7 HOURS)**

## 4.1 Rhythmic gymnastics: (i) basic exercises (throw, catch, jumps, turns, waves & balance); and (ii) a combination

## 4.2 Physical fitness in gymnastics: (i) through free hand exercises; (ii) through apparatus i.e., medicine ball, skipping rope, wall bars, gymnastics bench, free weights, dumbbells, multi gym, rope climbing, modern fitness equipment (treadmill, elliptical upright and recumbent bikes etc.)

## 4.3 Trampoline gymnastics: (i) jumps, (ii) somersaults (forward), (iii) twists/turns on small

trampoline

### **PRACTICALS (60 HOURS)**

1. Rhythmic gymnastics: (i) basic exercises (throw, catch, jumps, turns, waves & balance); and (ii) combination
2. Physical fitness in gymnastics: (i) Free hand exercises; (ii) Use of apparatus - Medicine ball, skipping rope, wall bars, gymnastics bench, free weights, dumbbells, multi gym, rope climbing, modern fitness equipment (treadmill, elliptical upright and recumbent bikes, etc.)
3. Trampoline gymnastics: (i) jumps, (ii) somersaults (forward), (iii) twists/turns on small trampoline
4. Visit to the gymnastics centre

### **SUGGESTED READINGS**

1. Code of Points Trampoline Gymnastics, Federation Int. De Gymnastics, 2005.
2. Federation Internationale Gymnastics, Federation Int. De Gymnastics, 2006.
3. Jain, R., (2005) Play and Learn Gymnastics, Khel Sahitya Kendra,.
4. Jain, R., (2003) Play and Learn Gymnastics, New Delhi: Khel Sahitya Kendra,.
5. Brown (2009). How to Improve at Gymnastics. Crab tree Publishing Co., USA.
6. Stick land, L.R. (2008). Gender Gymnastics. Trans Pacific Press, Japan.
7. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

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**Semester-V**  
**BSc-PE-DSE-3 (4)-301 (vii):HANDBALL**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre- requisite of The course (if any)
		Lecture	Tutorial	Practical / Practice		
<b>BSc-PE-DSE-3 (4)-301 (vii): HANDBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Outcome:** - The learner will be able to use the knowledge of Handball on the ground and will have a command of the basic and advanced rules and regulations of marking the ground and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Analyze Performance and Videos
3. Understand Prerequisites of preparation and training
4. Marking, construct and maintain handball court,
5. Officiate and Coach with understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, umpires, Role of sports psychologists, sports physiotherapists, and fitness trainers
7. Train children, beginners, intermediate players (advanced sportspersons) seniors (high performance sportspersons)
8. Organize Competitions
9. Train motor components through technical preparation
10. Conduct Tests (AAHPERD Youth Fitness Test, AAHPERD Health Related Fitness Test, National Physical Efficiency Test, Indiana motor Fitness Test Skill tests – Cornish Handball Test
11. Evaluate of team performance-observes techniques, statistical techniques and scouting charts.

## **THEORY SYLLABUS (30 HOURS)**

### **UNIT-I RULES AND THEIR INTERPRETATIONS (8 HOURS)**

- 1.1 Latest rules and their Interpretations
- 1.2 Match Analysis-Evaluation of players' performance during matches, Video analysis of skills and techniques,
- 1.3 Assessment of Prospective Opponents.

1.4 Duties and responsibilities of officials

1.5 Mechanism of officiating and scoring

## **UNIT-II PREPARATION AND TRAINING (8 HOURS)**

2.1 Prerequisites of preparation and training

- Theory of handball training process

2.2 Basic Skills And Techniques

- Catching – chest level, head and reaching height, side, below waist, one hand, in air
- Passing – straight shoot pass (with and without blocking), underhand, wrist, push and bounce
- Shooting (throw on goal ) - straight shot with variation, jump shot with variation, jump shot long (near shot zone)
- Jump shot (long shot zone), penalty shot (7 m.), jump fall shot, side straight
- shot, back flick, lob
- Dribbling – high and low
- Feints – a system of feints, play round and off, offensive and defensive
- Goalkeeper
- Preparation, pre-contact movement, contact
- Teaching Progression
- Coaching points
- Tactical application
- Drills for skill development (Any Five)

2.3 The Court Defense – general characteristics, teaching progression and coaching tips, position-specific and other defense drills, Lead - games for beginners in handball, Teaching of handball skills - preparing a lesson plan.

2.4 Development of motor components with specific reference to handball, Specific training methods for different positions

2.5 Development of handball-specific fitness components

## **UNIT-III ORGANIZATION (8 HOURS)**

3.1 Selection of a team and conduct of a camp.

3.2 Playfield technology planning, construction and maintenance of the handball court,

3.3 Conduct of a tournament,

3.4 Short-term and long-term planning for organization of a competition,

3.5 Report writing, photography, analysis, and commentary

## **UNIT-IV MEASUREMENT AND EVALUATION (8 HOURS)**

4.1 Fitness tests - Fitness tests- AAHPERD Youth Fitness Test, AAHPERD Health Related

Fitness Test, Fleishman Physical fitness test, National Physical Efficiency Test, Indiana motor Fitness Test

4.2 Skill tests – Cornish Handball Test

4.3 Evaluation of team performance – observation techniques, statistical techniques, scouting Charts

### **PRACTICALSYLLABUS (60 HOURS)**

1. Learning and demonstrating various skills/ techniques of sports.
2. Learning to demonstrate various drills for perfecting a skill
3. Learning and demonstrating to complete the process of scoring/judgment.

### **SUGGESTED READINGS**

1. Jain, D., Play & Learn Handball, New Delhi, Khel Sahitya Kendra, 2003.
2. Jain D (2003). Play & Learn Handball. Khel Sahitya Kendra. New Delhi.
3. Kleinman, I. (2009). Complete Physical Education Plans. 2<sup>nd</sup> Ed. Human Kinetics, USA.
4. Surhone, L.M. et.al, (2010). Team Handball. Betascript Publishing, USA
5. Phillips, B.E. (2009). Fundamental Handball. Kessinger Publishers, USA.
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-V**  
**BSc-PE-DSE-3 (4)-301(viii):HOCKEY**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Prerequisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-3(4)301(viii): HOCKEY</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Outcome:** - The learner will be able to use the knowledge of Hockey on the ground and will have a command of the basic and advanced rules and regulations of marking the ground and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Analyze Performance and Videos
3. Understand Prerequisites of preparation and training
4. Marking, construct and maintain Hockey court,
5. Officiate and Coach with understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, umpires, Role of sports psychologists, sports physiotherapists, and fitness trainers
7. Train children, beginners, intermediate players (advanced sportspersons) seniors (high performance sportspersons)
8. Organize Competitions
9. Train motor components through technical preparation
10. Conducts Tests (AAHPERD Youth Fitness Test, AAHPER Health Related Fitness Test, Fleishman Physical Fitness Test, National Physical Efficiency Test, Indiana motor Fitness Test Skill Tests – Schmitha's French Field Test, Freidel Field Test.
11. Evaluate of team performance- observe techniques, statistical techniques and scouting charts.

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I RULES AND THEIR INTERPRETATIONS (8 HOURS)**

- 1.1 Latest rules, and their interpretations

- 1.2 Duties and responsibilities of officials
- 1.3 Mechanism of officiating and scoring
- 1.4 Match Analysis-Evaluation of player performance during matches
- 1.5 Video - analysis of skills and techniques, Assessment of prospective opponents

## **UNIT-II PREPARATION AND TRAINING (8 HOURS)**

- 2.1 Prerequisites of preparation and training
- 2.2 Basic skills and techniques
  - Hitting
  - Passing
  - Dribbling
  - Scoop
  - Bully
  - Grip
  - Flicking
  - Goalkeeping
  - ☐ Preparation, pre-contact movement, contact
  - ☐ Teaching Progression
  - ☐ Coaching Points
  - ☐ Tactical application
  - ☐ Drills for skill development (any five)
- 2.3 The Field Defense – general characteristics, teaching progression and coaching tips, position-specific and other defense drills, Lead - up games for beginners, Teaching of hockey skill - preparing a lesson plan.
- 2.4 Development of motor components with specific reference to hockey, Specific training methods for different positions
- 2.5 Development of hockey-specific fitness components

## **UNIT-III ORGANIZATION (7 HOURS)**

- 3.1 Organization-Selection of a team and conduct of a camp,
- 3.2 Playfield technology - planning, construction, and maintenance of a hockey field,
- 3.3 Conduct of a tournament,
- 3.4 Short-term and long-term - planning for the content of a competition,
- 3.5 Report writing, photography, analysis, and commentary

## **UNIT-IV MEASUREMENT AND EVALUATION (7 HOURS)**

- 4.1 Fitness tests - Fitness tests- AAHPERD Youth Fitness Test, AAHPERD Health Related Fitness Test, Fleishman Physical fitness test, National Physical Efficiency Test, Indiana Motor Fitness Test
- 4.2 Skill Tests – Schmidthal’s French Field Test, Freidel Field Test.
- 4.3 Evaluation of team performance – observation techniques, statistical techniques, scouting charts

## **PRACTICALSYLLABUS (60 HOURS)**

1. Techniques of Fundamental Skills
2. Beating an opponent or dodging
3. Ball passing and tackling
4. Applied tactics of defense – positioning by a defender, defensive attacker, interchanging of position
5. Attacking tactics – Creating Gaps, mobility
6. Refining of skills
7. Goal - keeping
8. Match officiating: Umpire signals
9. Playfield Marking

## **SUGGESTED READINGS**

- Umpires. India, International Hockey Federation, 2003.
- Jain, D.,( 2003) Hockey Skills & Rules New Delhi, khel Sahitya Kendra,.
- Narang, P., (2003) Play & Learn Hockey, Khel Sahitya Kendra, New Delhi,
- Thani Yograj., Coaching Successfully Hockey, Delhi, Sports Publication, 2002.
- Walter, R. and Johnson, M. (2009). Hockey Plays and Strategies. Human Kinetics, USA.
- Pecknold, R. and Foeste, A. (2009). Hockey: Essential Skills. McGraw Hills, USA.
- Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-V**  
**BSc-PE-DSE-3 (4)-301 (ix):JUDO**

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
BSc-PE-DSE-3 (4)-301 (ix): JUDO	4	2	0	2	ClassXII pass	NIL

**Learning Outcome:** - The learner will be able to use the knowledge of Judo and will have a command on the basic and advance rules and regulations of Judo and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Analyze Performance and Videos
3. Understand Prerequisites of preparation and training
4. Marking, constructing and maintain Field/court,
5. Officiate and Coach with an understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, umpires, Roles of sports psychologists, sports physiotherapists, and fitness trainers
7. Train children, beginners, intermediate players (advanced sportspersons) seniors (high-performance sportspersons)
8. Apply Safety measures and prevent injuries
9. Manage injuries' Causes
10. Rehabilitate and massage athletes
11. Organize Competitions
12. Identify classification and components of nutrition and energy requirements of athletes in specified events
13. Train motor components through technical preparation
14. Conduct Tests (AAHPERD Youth Fitness Test, AAHPHER Health Related Fitness Test, National Physical Efficiency Test, Indiana Motor Fitness Test )
15. Observe techniques, statistical techniques and scouting charts.

## **THEORY SYLLABUS (30 HOURS)**

### **UNIT-I TECHNICAL PREPARATION FOR JUDO (8 HOURS)**

- 1.1 Required motor abilities
- 1.2 Technical preparation and grading system
- 1.3 Competition area, equipment, etc.
- 1.4 Physical, physiological and psychological preparation
- 1.5 Officiating and Coaching-Qualifications, qualities and Responsibilities of a Coach,  
philosophy of coaching, Qualifications and responsibilities/functions of technical  
officials,

### **UNIT-II SYSTEMATIZATION OF TRAINING PROCESS AND SAFETY MEASURES (8 HOURS)**

- 2.1 Systematizing training process for players – warming up, cooling-down, supplementary  
exercises, basic skills, weight training, circuit-training
- 2.2 Training for beginners, Training for intermediate players, Training for high performers
- 2.3 Prevention of injuries Causes and remedies of injuries in judo and safety measures

### **UNIT-III DIET, NUTRITION AND SPORTS PERFORMANCE (7 HOURS)**

- 3.1 Meaning, definition, classification, and components of nutrition
- 3.2 Energy requirements of Judokas
- 3.3 Nutritional guidelines for Judokas: pre-, during, and post competition phases

### **UNIT-IV MEASUREMENT AND EVALUATION (7 HOURS)**

- 4.1 Fitness tests - Fitness tests- AAHPERD Youth Fitness Test, AAHPERD Health  
Related Fitness Test, Fleishman Physical fitness test, National Physical



## Efficiency

Test, Indiana Motor Fitness Test

1.2 Skill/Playing Ability Tests for judo players –

### **PRACTICAL (60 HOURS)**

1. Warming-up (general and specific), cooling down, supplementary and stretching exercises
2. Demonstration of judo techniques
3. Variations and combination of judo techniques
4. Training in fundamentals of judo
5. Visit to a Judo Centre
6. Planning for competitions
7. Organization of a competition/seminar/workshop/clinic

### **SUGGESTED READINGS**

1. Harrison, E.J.,( 2002) Coaching Successfully Judo, Delhi: Sports,.
2. Jain, D., (2003) Play and Learn Judo, New Delhi: Khel Sahitya Kendra,.
3. Putin, V, Shestakov, V. ad evitsky, A.(2004). Judo: History, Theory and Practice. Blue Snake Books, Moscow.
4. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-V**  
**BSc-PE-DSE-3 (4)-301 (x):KABADDI**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Prerequisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
<b>BSc-PE-DSE-3 (4)-301 (x): KABADDI</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Objective:-**The students will acquire knowledge and understanding of a specific sport in which an individual wishes to excel. The learner will be able to use the knowledge of Kabaddi in the court and will have a command of the basic and advanced rules and regulations of marking the court and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Analyze Performance and Videos
3. Understand Prerequisites of preparation and training
4. Marking, constructing and maintaining Field/court,
5. Officiate and Coach with an understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, umpires, Roles of sports psychologists, sports physiotherapists, and fitness trainers
7. Train children, beginners, intermediate players (advanced sportspersons) seniors (high-performance sportspersons)
8. Apply Safety measures and prevent injuries
9. Manage injuries' Causes
10. Rehabilitate and massage athletes
11. Organize Competitions
12. Identify classification and components of nutrition and energy requirements of athletes in specified events
13. Train motor components through technical preparation

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I Skill, Tactics & Technical Aspects (8 HOURS)**

- Advance defensive skills in kabaddi
- Advance offensive skills in kabaddi
  - Concept of tactics and strategy
  - Offensive and defensive tactics in kabaddi

## **UNIT-II Performance Dimensions (8 HOURS)**

- Anatomical Consideration in a kabaddi.
- Physiological basis to performance in a kabaddi.
- Bio-mechanical analysis of skills/techniques.
- Psychological concept in kabaddi.
- Sociological concept in kabaddi.

## **UNIT-III Athlete Care & Rehabilitation in Kabaddi (7 HOURS)**

- Preventive and safety measures in kabaddi
- Sports injuries in kabaddi
- P.R.I.C.E. Injury Treatment Principle
- Rehabilitation Methods

## **UNIT-IV Organization & Officials (7 HOURS)**

- Selection & conduct of coaching Camps
- Officials' Qualification, duties & Knowledge of Score sheet
- Organization of a Kabaddi tournament
- Report Writing on the Kabaddi Tournament.

## **Practical Syllabus (60 HOURS)**

1. Skills & its developing exercises (Drills)
2. Officiating in a Kabaddi Match

3. Scoring in a Kabaddi Match

4. Demonstration and practice of Tactical Pattern

### **SUGGESTED READINGS**

1. Kumar, Dharmander. (2018). Kabaddi and It's Playing Techniques. Writers Choice, New Delhi.
2. Kumar, Dharmander. (2023). Kabaddi Dynamics: Skill, Technics, Tactics & Science, Khel Sahitya Kendra, New Delhi.
3. Mishra, S.C. (2007). Teach Yourself Kabaddi. Sports Publications, New Delhi.
4. Syal, M. (2004). Kabaddi Teaching. Prerna Parkashan, New Delhi.
5. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-V**

**BSc-PE-DSE-3 (4)-301(xi):KHO-KHO**

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Prerequisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-3 (4)-301(xi): KHO-KHO</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII passes</b>	<b>NIL</b>

**Learning Outcome:** - The learner will be able to use the knowledge of Kho-Kho in the court and will have a command on the basic and advanced rules and regulations of marking the court and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Analyze Performance and Videos
3. Understand Prerequisites of preparation and training
4. Marking, construct and maintain Field/court,
5. Officiate and Coach with understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, umpires, Role of sports psychologists, sports physiotherapists, and fitness trainers
7. Train children, beginners, intermediate players (advanced sportspersons) seniors (high performance sportspersons)
8. Apply Safety measures and prevent of injuries
9. Manage injuries' Causes
10. Rehabilitate and massage athletes
11. Organize Competitions
12. Identify classification and components of nutrition, Energy requirements of athletes in specified events
13. Train motor components through technical preparation
14. Conduct Tests (AAHPERD Youth Fitness Test, AAHPHED Health Related Fitness Test, Fleishman Physical Fitness Test, National Physical Efficiency Test, Indiana motor Fitness Test Skill Tests.
15. Evaluation of team performance- observe techniques, statistical techniques and scouting charts.

## **THEORY SYLLABUS (30 HOURS)**

### **UNIT-I RULES AND THEIR INTERPRETATIONS (8 HOURS)**

2.1 Latest Rules, and their Interpretations

2.2 Match analysis- Evaluation of player's performance during matches, Video analysis of skills and techniques, Assessment of prospective opponents

### **UNIT-II PREPARATION AND TRAINING (8 HOURS)**

2.1 Prerequisites of preparation and training

- o Theory of Kho-kho Training Process

2.2 Basic skills and techniques

- o Running – chain game - single chain, double chain 3-3-2

- o Feint

- o Dosing

- o Oval

- o Chasing – pole dive – sitting, running, fake, and pole dive

- o Sitting and block

- o Dive – air dive, sitting dive, flat dive

2.3 Preparation, pre-contact movement, contact, Teaching progression, Coaching points, Tactical application, Drills for skill development (any five), The court defense – general characteristics, teaching progression and coaching tips, position-specific and other defense drills, Lead - up games for beginners in Kho-kho, Teaching of Kho-kho skill - preparing a lesson plan

2.4 Development of motor components with specific reference to Kho-kho, Specific training methods for different positions

2.5 Development of Kho-kho-specific fitness components

### **UNIT-III ORGANIZATION (7 HOURS)**

3.1 Organization and Constitution of KKFI and Affiliated Units, Organization- Selection of a team and conduct of a camp,

3.2 Playfield technology planning, construction and maintenance of Kho-Kho Court,

3.3 Conduct of a tournament,

3.4 Short-term and long-term planning for the organization of a competition,

3.5 Report writing, photography, analysis and commentary

### **UNIT-IV MEASUREMENT AND EVALUATION (7 HOURS)**

- 4.1 Fitness tests - AAHPERD Youth Fitness Test, Barrow General Motor Ability Test.
- 4.2 Skill tests
- 4.3 Evaluation of team performance – observation techniques, statistical techniques, scouting charts

### **Practical (60 HOURS)**

- 1. Skills & its developing exercises (Drills)
- 2. Officiating in a Kho-kho Match
- 3. Scoring in a Kho-kho Match
- 4. Demonstration and practice of Tactical Pattern
- 5. Measurement of Sport-specific skill tests

### **SUGGESTED READING**

- 1. Chakrabarty, G., Kho - Kho Aveloken, Delhi, Khel Sahitya Kendra, 2002.
- 2. Panday, L., Kho - Kho Sarvaswa, New Delhi Metropolitan, 1982.
- 3. Vanaik A. (2005). Playfield Manual, Friends Publication. New Delhi
- 4. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-V**  
**BSc-PE-DSE-3 (4)-301(xii):VOLLEYBALL**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-3 (4)-301(xii): VOLLEYBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Outcome:** - The learner will be able to use the knowledge of Volleyball in the court and will have a command on the basic and advanced rules and regulations of marking the court and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Analyze Performance and Videos
3. Understand the Prerequisites of preparation and training
4. Marking, constructing, and maintain Field/court,
5. Officiate and Coach with an understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, umpires, Roles of sports psychologists, sports physiotherapists, and fitness trainers
7. Train children, beginners, intermediate players (advanced sportspersons) seniors (high-performance sportspersons)
8. Apply Safety measures and prevent injuries
9. Manage injuries' Causes
10. Rehabilitate and massage athletes
11. Organize Competitions
12. Identify classification and components of nutrition and energy requirements of athletes in specified events
13. Train motor components through technical preparation
14. Conduct Tests (AAHPERD Youth Fitness Test, Indiana Motor Fitness Test, Philips JCR Test Skill Tests – AAHPERD, Russell-Lange, Brady's Volleyball Test
15. Evaluation of team performance- observes techniques, statistical techniques and scouting charts.

**THEORY SYLLABUS (30 HOURS)**



## **UNIT-I RULES AND THEIR INTERPRETATIONS (8 HOURS)**

- 1.1 Latest rules, and their interpretations
- 1.2 Duties and responsibilities of officials
- 1.3 Mechanism of officiating and scoring
- 1.4 Match analysis- Evaluation of player's performance during matches, Video analysis of skills and techniques,
- 1.5 Assessment of Prospective Opponents

## **UNIT-II PREPARATION AND TRAINING (8 HOURS)**

- 2.1 Prerequisites of preparation and training
  - Theory of volleyball training process
  - General and specific warming up and cooling down (specific exercises for volleyball)
  - Principles of warming up and cooling down and their effects
- 2.2 Basic skills and techniques
  - o The serve – underhand, tennis, jump and serve overhead float
  - o Forearm passing
  - o Overhead Passing
  - o Spiking/attack
  - o Blocking
    - Preparation, pre-contact movement, contact
    - Teaching progression
    - Coaching points
    - Tactical application
    - Drills for skill development (any five)
- 2.3 The court defense – general characteristics, teaching progression, and coaching tips, position-specific and other defense drills, Lead - games for beginners in volleyball, Teaching volleyball skill - preparing a lesson plan
- 2.4 Development of motor components with specific reference to volleyball, Specific training methods for different positions
- 2.5 Development of volleyball-specific fitness components

## **UNIT-III ORGANIZATION (7 HOURS)**

- 3.1 Organization- Selection of a team and conduct of a camp,
- 3.2 Playfield technology - planning, construction, and maintenance of the Volleyball

court

3.3 Conduct of a tournament,

3.4 Short-term and long-term planning for the organization of a competition,

3.5 Report writing, photography, analysis, and commentary

#### **UNIT-IV MEASUREMENT AND EVALUATION (7 HOURS)**

4.1 Fitness tests - AAHPERD Youth Fitness Test, Indiana motor Fitness Test, Philips JCR Test

4.2 Skill Tests – AAHPERD, Russell-Lange, Brady's Volleyball Test

4.3 Evaluation of team performance – observation techniques, statistical techniques, scouting charts.

#### **Practical Syllabus (60 HOURS)**

1.Skills & its developing exercises (Drills)

2.Officiating in a Volleyball Match

3.Scoring in a Volleyball Match

4.Demonstration and practice of Tactical Pattern

5. Sport-specific skill tests

#### **SUGGESTED READING**

- The National Alliance for Youth. Sports (2009). Coaching Volleyball For Dummies Publishers, USA.
- Volleyball, USA (2009). Volleyball: Systems and Strategies. Human Kinetics, USA.
- Bompa O. Tudor and Half G. Gregory. (2009) "Periodization Theory and Methodology of Training" Human kinetics. NY.
- Kenny, B. and Gregory, C. (2006). Volleyball: Steps to Success. Human Kinetics, USA.
- Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester-V**  
**BSc-PE-DSE-3 (4)-301(xiii):YOGA**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Prerequisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>B Sc-PE-DSE- 3(4) – 301 (xii): YOGA</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning objective:** - The learner will be able to use the knowledge of Yoga in real life and will have a command on the basic and advanced rules and regulations of Yoga and conduct a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Understand yoga its limitations and misconceptions
2. Identify the importance of yoga in education and other fields Rules and regulations for yoga championships: State, national, international, SGFI, AIU.
3. Understand the Pre-Vedic and Vedic period
4. Organize -Select teams and conduct camps
5. Officiate and Coach with an understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, umpires, Roles of sports psychologists, sports physiotherapists, and fitness trainers
7. Train children, beginners, intermediate players (advanced sportspersons) seniors (high-performance sportspersons)
8. Apply Safety measures and prevent injuries
9. Manage injuries' Causes
10. Identify classification and components of nutrition and energy requirements in specified events

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I YOGA EDUCATION: (8 HOURS)**

- 1.1 Meaning, definition, and scope of yoga, limitations and misconceptions, the importance of yoga in education and other fields
- 1.2 Pre-vedic and Vedic period; upanishad, sutra period, patanjali yoga sutra; hatha yoga tantra

## **UNIT-II RULES AND THEIR INTERPRETATIONS (8 HOURS)**

- 2.1 Rules and regulations for yoga championships: State, national, international, SGFI, AIU.
- 2.2 Officiating and coaching - Qualifications, qualities, and responsibilities of a coach, Duties/responsibilities of technical official, Scoring system and judgment criteria, Protocols for referees, judges and officials

## **UNIT-III ORGANIZATION OF YOGA COMPETITION: (7 HOURS)**

- 3.1 Structure and organization of yoga competition
- 3.2 Preparation, execution, and closing of the competition
- 3.3 Protocols and Ceremonies

## **UNIT-IV NUTRITION IN YOGA (7 HOURS)**

- 4.1 Meaning, definition, classification, and components of nutrition, nutrients
- 4.2 Yogic diet
- 4.3 PRATHYARA, VEGETARIAN DIET

## **PRACTICALS (60 HOURS)**

- 1. Visit to yoga center
- 2. Planning for a Yoga competition
- 3. Organization of a Yoga competition
- 4. Project on research in Yoga
- 5. Officiating in Yoga competitions

## **SUGGESTED READINGS**

- Kaminoff, L. et al (2007). Yoga Anatomy. Human Kinetics, USA.
- Kirk, M. (2005). The Hatha Yoga Illustrated. Human Kinetics, USA.
- Sharma JP and Ganesh S(2007). Yog Kala Ek Prichya. Friends Publication. New Delhi
- Sharma J. P. (2007). Manav Jeevan evam yoga. Friends Publication. New Delhi.
- Sharma Jai Prakash and Rathore Bhupender Singh (2007). Yoga Ke Tatva. Friends Publication. Delhi

- Mukerji, A.P. (2010). The Doctrine and Practice of Yoga. General Books, LLC, New Delhi.
- Norton, W.W. (2010). Yoga for Osteoporosis: The Complete Guide. W.W. Norton & Company, USA.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**Semester V**  
**BSc-PE-DSE-3 (4)-301 (xiv): SWIMMING**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSE-3(4)-301 (xiv): SWIMMING</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Outcome:** - The learner will be able to use swimming knowledge and have a command of the basic and advanced skills and will have knowledge of rules and regulations for competitions and conducting competition.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Set pool profile for competitions
2. Officiate and Coach with an understanding of Duties/responsibilities
3. Identifies Protocols of referees, judges. Roles of sports psychologists, sports physiotherapists, and fitness trainers
4. Train children, beginners, intermediate players (advanced sportspersons) seniors (high-performance sportspersons)
5. Apply Safety measures and prevent injuries
6. Manage injuries' Causes
7. Rehabilitate and massage athletes
8. Organize Competitions
9. Identify classification and components of nutrition and energy requirements of athletes in specified events
10. Train motor components through technical preparation

**THEORY SYLLABUS (30 HOURS)**

**UNIT-I TECHNICAL PREPARATION FOR SWIMMING (8 HOURS)**

- 1.1 Training of motor components required in the game of swimming
- 1.2 Technical preparation – reflexes, perceptual sense, neuro-muscular coordination
- 1.3 Construction and maintenance of swimming pools, equipment etc.
- 1.4 Physical, physiological, and Psychological preparation
- 1.5 Officiating and Coaching -Duties/responsibilities, qualifications, and qualities of a coach, Philosophy of coaching, Qualifications, and responsibilities/functions of

technical officials, Protocols of referees, judges

1.6 Role of sports psychologists, sports physiotherapists and fitness trainers

## **UNIT-II SYSTEMATIZATION OF TRAINING PROCESS (8 HOURS)**

2.1 Systematizing training process for swimming players – general warming-up, specific warming-up and cooling-down

2.2 Supplementary exercises, basic skills in swimming

2.3 Training for beginners, Training for intermediate players - advanced sportspersons, Training for seniors - high-performance sportspersons.

2.4 Prevention of injuries and Safety measures.

## **UNIT-III ORGANISATION OF THE COMPETITION (7 HOURS)**

3.1 Planning for the Competition

3.2 Selection of men, material and management

3.3 Concluding the competition – submission of accounts, preparing a report

3.4 Protocols and Ceremonies

## **UNIT-IV DIET, NUTRITION AND SPORTS PERFORMANCE (7 HOURS)**

4.1 Meaning, definition, classification, and components of nutrition

4.2 Energy requirements of swimmers

4.3 Nutritional requirements of swimming players: pre-, during, and post-competition phases

## **PRACTICALS (60 HOURS)**

1. Demonstration of skills

2. Training for advanced skills for competitions

3. Shadow practice and pressure training, planning for competition,

4, Organization of competition/seminar/workshop.

## **SUGGESTED READINGS**

1. David J., Mathur M. (1994). “How to learn swimming in 30 days” UBS Publishers, New Delhi, India.
2. Jain. R. (2003). “Play and Learn Swimming” Khel Sahitya Kendra, New Delhi, India

3. Jain. D. (2003). "Swimming Skills & Rules" Khel Sahitya Kendra, New Delhi, India
4. Hardy, Colin (1987) "Handbook for the Teacher Of Swimming" Pelham books ltd., London (U.K)
5. Bompa O. Tudor and Halff G. Gregory. (2009) "Periodization Theory and Methodology of Training" Human kinetics. NY.
6. Thomas, David G., (2005). "Swimming STEPS TO SUCCESS" Human Kinetics, U.S.A
7. Singh, Hardayal. (2019). Science of Sports Training. DVS Publication, N. Delhi.
8. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

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**Semester-V**  
**BSc-PE-DSE-3 (4)-301 (xv): WRESTLING**

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
BSc-PE-DSE-3 (4)-301 (xv): WRESTLING	4	2	0	2	Class XII pass	NIL

**Learning Outcome:** - The learner will be able to use the knowledge of Wrestling and will have a command on the basic and advance rules and regulations of Wrestling and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Organize -Select teams and conduct camps
2. Analyze Performance and Videos
3. Understand Prerequisites of preparation and training
4. Marking, constructing and maintain Field/court,
5. Officiate and Coach with an understanding of Duties/responsibilities
6. Identifies Protocols of referees, judges, Roles of sports psychologists, sports physiotherapists, and fitness trainers
7. Train children, beginners, intermediate players (advanced sportspersons) seniors (high-performance sportspersons)
8. Apply Safety measures and prevent injuries
9. Manage injuries' Causes
10. Rehabilitate and massage athletes
11. Organize Competitions
12. Identify classification and components of nutrition and energy requirements of athletes in specified events
13. Train motor components through technical preparation
14. Conduct related physical fitness tests

**THEORY SYLLABUS (30 HOURS)**

## **UNIT-I TECHNICAL PREPARATION FOR WRESTLING (8 HOURS)**

- 1.1 Required motor abilities for wrestlers
- 1.2 Technical preparation, Competition area, equipment, etc
- 1.3. Physical, physiological and psychological preparation
- 1.4 Officiating and Coaching-Qualifications, qualities and Responsibilities of a Coach, philosophy of coaching,
- 1.5 Qualifications and responsibilities/functions of technical officials

## **UNIT-II SYSTEMATIZATION OF TRAINING PROCESS AND SAFETY MEASURES (8 HOURS)**

- 2.1 Systematizing training process for players – warming up, cooling-down, supplementary exercises, basic skills in Wrestling
- 2.2 Training for beginners, Training for intermediate players, Training for high performers
- 2.3 Prevention of injuries Causes and remedies of injuries in Wrestling and safety measures

## **UNIT-III DIET, NUTRITION AND SPORTS PERFORMANCE (7 HOURS)**

- 3.1 Meaning, definition, classification, and components of nutrition
- 3.2 Energy requirements of Wrestlers
- 3.3 Nutritional guidelines for Judokas: pre-, during, and post competition phases

## **UNIT-IV MEASUREMENT AND EVALUATION (7 HOURS)**

- 4.1 Fitness tests for Wrestlers
- 4.2 Skill/Playing Ability Tests for Wrestling players

## **PRACTICAL (60 HOURS)**

- 1. Warming-up (general and specific), cooling down, supplementary and stretching exercises
- 2. Demonstration of Wrestling techniques
- 3. Training in fundamentals of Wrestling
- 4. Visit to a Wrestling Centre
- 5. Planning for competitions
- 6. Organization of a competition/seminar/workshop/clinic

## **SUGGESTED READINGS**

1. Gable, D. (1999) “Coaching Wrestling Successfully” Human Kinetics, U.S.A
2. Camaione D. & Tillman K. (1980) “Teaching & Coaching Wrestling A Scientific Approach” John Wiley & Sons. Inc., U.S.A.
3. Kumar N. (2005) “Play & Learn Wrestling” Khel Sahitya Kendra, New Delhi, India.
4. Patwardhan G. (2002) “Coaching Successfully Wrestling” Sports Publication, Delhi.
5. Bompa O. Tudor and Half G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

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## Semester V

### BSc-PE-DSE-3 (4)-301 (xvi): TABLE TENNIS

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-3(4)-301 (xvi): TABLE TENNIS	4	2	0	2	Class XII pass	NIL

**Learning Outcome:** - The learner will be able to use Table Tennis knowledge on the ground and have a command of the basic and advanced rules and regulations and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Marking, constructing and maintaining Table Tennis Court
2. Officiate and Coach with an understanding of Duties/responsibilities
3. Identifies Protocols of referees, judges, Roles of sports psychologists, sports physiotherapists, and fitness trainers
4. Train children, beginners, intermediate players (advanced sportspersons) seniors (high-performance sportspersons)
5. Apply Safety measures and prevent injuries
6. Manage injuries' Causes
7. Rehabilitate and massage athletes
8. Organize Competitions
9. Identify classification and components of nutrition and energy requirements of athletes in specified events
10. Train motor components through technical preparation

### THEORY SYLLABUS (30 HOURS)

#### UNIT-I TECHNICAL PREPARATION FOR TABLE TENNIS (8 HOURS)

- 1.1 Training of motor components
- 1.2 Technical preparation – reflexes, perceptual sense, neuro-muscular coordination
- 1.3 Construction and maintenance of Table Tennis court, equipment etc.
- 1.4 Physical, physiological, and Psychological preparation
- 1.5 Officiating and Coaching -Duties/responsibilities, qualifications, and qualities of a coach, Philosophy of coaching, Qualifications, and responsibilities/functions of

- technical officials, Protocols of referees, judges,
- 1.6 Role of sports psychologists, sports physiotherapists and fitness trainers

## **UNIT-II SYSTEMATIZATION OF TRAINING PROCESS (8 HOURS)**

- 2.1 Systematizing training process for Table Tennis players – general warming-up, specific warming-up and cooling-down
- 2.2 Supplementary exercises, basic skills in Table Tennis game
- 2.3 Training for beginners, Training for intermediate players - advanced sportspersons, Training for seniors - high-performance sportspersons.
- 2.4 Prevention of injuries and Safety measures.

## **UNIT-III ORGANISATION OF THE COMPETITION (7 HOURS)**

- 3.1 Planning for the Competition
- 3.2 Selection of men, material and management
- 3.3 Concluding the competition – submission of accounts, preparing a report
- 3.4 Protocols and Ceremonies

## **UNIT-IV DIET, NUTRITION AND SPORTS PERFORMANCE (7 HOURS)**

- 4.1 Meaning, definition, classification, and components of nutrition
- 4.2 Energy requirements of badminton players
- 4.3 Nutritional requirements of badminton players: pre-, during, and post-competition phases

## **PRACTICALS (60 HOURS)**

1. Demonstration of skills
2. Training for footwork
3. Shadow practice and pressure training, planning for competition, organization of competition/seminar/workshop.

## **SUGGESTED READINGS**

1. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
2. Jain D. (2001) “ Teaching& Coaching Table Tennis” Khel Sahitya Kendra, Delhi.

3. Burn B. (1979) “ The Science of Table Tennis” S. Chand & Company ltd., N. Delhi.
4. Singh, Hardayal. (1919). Science of Sports Training. DVS Publication, N. Delhi.
5. Jain D. (2003) “Table Tennis skills & Rules” Khel Sahitya Kendra, N. Delhi.
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

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## SEMESTER-V

### BSc-PE-DSE-3(4)-302: SPORTS JOURNALISM

Course title& Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course ( if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-3(4)-302: SPORTS JOURNALISM	4	3	0	1	Class XII pass	NIL

**Learning Objective:** - the students will learn to apply knowledge of sports journalism and research in sports and Physical Education.

**Learning Outcomes:** After completing the course, the students will be able to:

- Understand changing trends of journalism in sports.
- Identifies the Role of journalism in sports promotion & Vice – versa
- Understand Historical development & role of print and electronic media in sports promotion
- Understand the Organizational set-up of a newspaper- printing, process sequences of operations in the printing of a newspaper/journals
- Identifies various sports organizations and agencies
- Understand the Theory and principles of advertising in sports, Public relations in sports, press releases, conferences Public relations media
- Understands aspects of journalism by practicing the art on platforms like local tournaments and during sports meets.

### THEORY SYLLABUS (45 HOURS)

#### UNIT-I INTRODUCTION & WRITING SKILLS (12 Hrs)

- 1.1 Meaning and scope of journalism in sports.
- 1.2 Role of journalism in sports promotion & Vice – versa
- 1.3 Historical development & role of print and electronic media in sports promotion,
- 1.4 Media, ethics and responsibilities of journalist & editor (social, legal, and professional)
- 1.5 Fundamentals of a sports story/ news, Language used

## **UNIT-II ORGANIZATIONAL AND PRESENTATION SKILLS FOR MEDIA (12 Hrs)**

2.1 The organizational set-up of a newspaper- printing, process sequences of operations in the printing of a newspaper/journals.

2.2 Introduction of various sports organizations and agencies- Olympic Games, Asian Games ,Commonwealth Games, awards, and trophies.

2.3 New types- Write-ups: feature, follow-ups, advance story, curtain raiser, flashback, articles, filters, editorials, boxes, radio and T.V. commentary anchoring, interviews, group discussions, talk – shows, and reviews in sports

2.4 Development and maintenance of sports / personal library Statistics, records, and computers in sports.

## **UNIT-III EXTENDED RELEVANT DIMENSIONS (11 Hrs)**

3.1 Theory and principles of advertising in sports, Public relations in sports, press releases, conferences

3.2 Public Relations Media – advertising, press releases, conferences, exhibitions, fairs, street drama, public speaking, radio, television, newspapers, films, posters, pictures, graphics, Sports photo features, and writing captions of photos.

## **UNIT-IV JOURNALISM AND SPORTS (10 Hrs)**

4.1 Introduction to photojournalism about sports. Process of newspaper publishing and management

4.2 Olympics and Sports Journalism. Research tools for developing a sports story

4.3 Introduction to various types of information technology. Satellite communication: use of satellite in radio and T.V. communication for sports information.

## **PRACTICAL: 30 Hours**

1. Reporting of sports event
2. Review of sports articles
3. Sports Photography
4. Article writing

## **SUGGESTED READINGS:**

1. Aamidor A (2003).Real Sports Reporting. Indiana University Press.Valparaiso. Indiana. U.S.A.



2. Ahuja, B.N (1988) Theory and Practice of Journalism. Surjeet Delhi.
3. Andrews P (2005). Sports Journalism: A Practical Introduction. Sage Publications Ltd. Delhi.
4. Boyle R (2006). Sports Journalism: Context and Issues. Sage Publications Ltd.

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## SEMESTER-V

### BSc-PE-DSE-3(4)-303: Sports Facility Planning and Management

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of The course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-3(4)-303: Sports Facility Planning and Management	4	3	0	1	Class XII pass	NIL

**Learning Objectives:** To acquaint the students with the management of various sports facilities planning and related Legislation

**Learning Outcomes: The Learner will able to:**

1. Learn the facility management and its assessment
2. Understand indoor and outdoor facility management in conjunction with facility maintenance and supervision.
3. Develop to know the concept of supply & Maintenance of Equipment.
4. Able to understand the fundamental concepts regarding Logistics management.

#### **THEORY SYLLABUS- (45 HOURS)**

##### **UNIT -1 HISTORY (10 Hours)**

- 1.1 Modern Era of Stadium
- 1.2 Technology in the Stadium
- 1.3 Types of Public Assembly – Arenas, facilities, convention centers, stadium, University venues, local/civic venues.

##### **UNIT – II FACILITY PLANNING (10 Hours)**

- 2.1 Meaning and concept of facility management
- 2.2 Planning the facility
- 2.3 Health and legal considerations in facility planning
- 2.4 Assessment of Facility Management

##### **UNIT – III FACILITY MANAGEMENT (10 Hours)**

3.1 Indoor facilities management – Site selection, Indoor surfaces, Walls, Ceilings, Doors, Windows, Acoustics, Service areas, Lighting & Air quality control.

3.2 Outdoor facility management – Site selection and Development, Natural surface, Synthetic surface, Fencing & Seating plan.

3.3 Facility maintenance.

3.4 Facility Supervision& Security.

#### **UNIT – IV FACILITY FINANCING AND LOGISTICS MANAGEMENT (15 Hours)**

4.1 Facility Financing Mechanism, why do cities subsidize sports facilities?

4.2 Facility marketing – Marketing and Promotion & Facility Revenues & Expenses

4.3 Career Opportunities-Marketing Director & Public Relations/Communication Director

4.4 Meaning and Concept of Logistics Management

4.5 Planning the Competition Venue

4.6 Venue operation and crowd safety

4.7 Selection and Training of Workforce

#### **PRACTICAL SYLLABUS - 30 HOURS**

1. Visit Indoor and Outdoor Sports facilities and prepare a detailed report.
2. Event Planning and Execution (Provide hands-on Experience in planning and organizing Sports Events, covering logistics, security & crowd management.
3. Budgeting and Financial Management (Guide students, through creating a budget for sports facilities considering operation costs, maintenance, and potential revenue streams.
4. Technology Integration (Explore the use of technology for efficient facility management)
5. Contract Negotiation and Vendor Management (Teach negotiation skills and vendor management techniques essential for securing services and resources for sports facilities.

## **SUGGESTED READINGS**

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach.
2. New York: Prentice hall Inc. Bucher, C. A. (1983). Administration of Physical Education and Athletic programme.
3. St. Louis: The C.V. Mosby Co. Kozman, H.C. Cassidy, R. & Jackson, C. (1960).
4. Methods in Physical Education. London: W.B. Saunders Co. Pandey, L.K. (1977).
5. Methods in Physical Education. Delhi: Metropolitan Book Depot. 2 years B.P.Ed Curriculum | 27 Sharma, V.M. & Tiwari, R.H.: (1979).
6. Teaching Methods in Physical Education. Amaravati: Shakti Publication. Thomas, J. P. (1967).
7. Organization & administration of Physical Education. Madras: Gyanodayal Press. Tirunaryanan, C. & Hariharan, S. (1969).
8. Methods in Physical Education. Karaikudi: South India Press. Voltmer, E. F. & Esslinger, A. A. (1979).
9. The organization and administration of Physical Education. New York: Prentice Hall Inc.

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**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS SCIENCES**  
**UGCFC: B.SC. PHYSICAL EDUCATION, HEALTH EDUCATION AND SPORTS**  
**(HONS.) NEP-2020**

**B.Sc (PE, HE & S) Hons.**

<b>SEMESTER</b>	<b>COURSE</b>	<b>CONTENT /CREDITS *</b>
<b>VI</b>	<b>Discipline Specific Course (DSC)</b>	<b>DSC -16 (4): Fundamental of Sports Training</b>  <b>DSC -17 (4): Test, Measurement &amp; Evaluation in Sports</b>  <b>DSC -18(4): Fitness and Wellness Management</b>
	<b>Discipline Specific Elective (DSE)</b>	<b>CHOOSE ONE FROM POOL OF COURSES</b>  <b>DSE -4(4) -401: Game of Specialization –I* (Teaching and Coaching) (Game to continue from Sem V)</b>  <b>DSE -4(4) -402: Research Methods in Physical Education and Sports</b>  <b>DSE-4(4)-403: Sports Field Technology</b>
	<b>Generic Elective (GE)</b>	<b>Choose one from a pool of courses (of other Departments) GE-6 (4)</b>
	<b>Ability Enhancement Course (AEC)</b>	<b>NONE</b>
	<b>Skill Enhancement Course (SEC)</b>  <b>OR</b>  <b>Internship/Apprenticeship/Project (2)</b>	<b>Choose one SEC or Internship/ Apprenticeship/ Project/ Community Outreach (2)</b>
	<b>Value Addition Course (VAC)</b>	<b>NONE</b>
		<b>Total Credits= 22</b>

\* (FIGURE IN BRACKETS DENOTE CREDITS)

# **SEMESTER VI**

**SEMESTER VI**  
**BSc-PE-DSC-16(4): FUNDAMENTALS OF SPORTS TRAINING**

Course title& Code	Credits	Credit distributionofthe course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSC-16(4): FUNDAMENTALS OF SPORTS TRAINING</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>Class XII pass</b>	<b>Nil</b>

**Learning Objective:** - Students will acquire the knowledge (theoretical and practical) and importance of Test measurement and evaluation in physical education and Sports.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Assess fitness in Sports & exercise.
2. Understand Tests, Measurement, and evaluation and their importance in the field of physical education
3. Construct Tests
4. Understand Physical fitness testing
5. Understand the Anthropometric Measurements
6. Administer Senior Fitness Test

**THEORY SYLLABUS: ( 45 HOURS)**

**UNIT-I INTRODUCTION TO SPORTS TRAINING (10 HOURS)**

- 1.1 Importance, definition, Aim, and objectives of Sports Training
- 1.2 Characteristics and Principles of Sports Training
- 1.3 Training, Load, Adaptation, and Recovery: Concept of Load & Adaptation and Factors Affecting Load & adaptation.

**UNIT-II MOTOR ABILITIES (10 HOURS)**

- **STRENGTH:** Types of strength (maximum strength; explosive strength, Relative Strength and Strength endurance ,etc.) & Determining Factors affecting strength performance and methods of strength training.
- **ENDURANCE:** Definition and significance of endurance, forms of endurance, and Methods to develop endurance.
- **SPEED:** Definition, types of factors determining speed, Methods to develop

speed abilities.

- **FLEXIBILITY:** Definition ,Factors affecting flexibility; and Methods used to develop flexibility.

### **UNIT- III TECHNICAL PREPARATION, TACTICS AND PERIODIZATION (15 HOURS)**

- Technical preparation: Definition and meaning of technique, skill, and style  
Technique training & its implication in various phases;
- Tactics and its aim, Principal of Tactical Preparation.
- Periodization: Need & types of Periodization
- Competition: Preparation for competition, number & frequency, competition preparation.

### **UNIT-IV SPORTS TALENT IDENTIFICATION & DEVELOPMENT (S.T.I.D). (10 HOURS)**

- Concept and definition of S.T.I.D.
- Aspects and contents of S.T.I.D.
- Modern trends of S.T.I.D.
- Indian and some foreign systems of S.T.I.D.

### **PRACTICAL TESTS**

- To measure the five motor abilities- speed, strength, endurance, flexibility and coordinative abilities.
- Selected test for STID- Any two tests.

### **SUGGESTED READINGS**

1. Baechle TR & Earle R W (2000). Essentials of strength training and conditioning. Human Kinetics.USA.
2. NewtonH (2006) Explosive lifting for sports. Human Kinetics.US.
3. Routhan,T (2018), Principles of Sports Training, Sports Publication, New Delhi.
4. Shaw,D(2021),Sports Training: General Theory and Methods of Sports Training and Exercise, Sports Publication, New Delhi.
5. Uppal,A.K(2018) Scientific Principle of Sports Training, Friends Publications, New Delhi.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**



**SEMESTER-VI**  
**BSc-PE-DSC 17(4): TEST MEASUREMENT AND EVALUATION IN SPORTS**

Course title& Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>BSc-PE-DSC 17(4): TEST MEASUREMENT AND EVALUATION IN SPORTS</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Objectives:** To impart knowledge and practices about the fitness components and Wellness and relation to health

**Learning Outcomes:** After completing the course, the students will be able to:

- Analyze and correlate the components of physical fitness, principles of physical fitness, and benefits of fitness programs.
- Analyze, correlate, and evaluate regarding fitness profile, development, and maintenance of the player including types of motor components, principles of physical fitness, and benefits of the fitness program.
- Identify, apply and correlate different aspects of wellness
- Describe different aspects of behavior modification regarding barriers to change
- Describe, apply, correlate, and measure different aspects of the daily schedule of achieving quality of life and wellness regarding daily schedule principles to achieve quality of life

**THEORY SYLLABUS (45 HOURS)**

**UNIT-I (9 HOURS)**

1.1 Introduction to Test, Measurement, and evaluation and its importance in the field of physical education

1.2 Test constructions:-

- a) General consideration
- b) Physical fitness/efficiency test

## **UNIT-II (10 HOURS)**

- 2.1 Physical fitness testing: components of physical fitness (Health and Skill), importance of physical fitness assessment
- 2.2. Strength test: - Kraus Weber strength test
- 2.3 Cardio-respiratory Fitness test: 1 Mile Rockport Test
- 2.4 Muscular Endurance Test: Bent-Knee Sit Ups.
- 2.5 Flexibility test- Sit and reach test
- 2.6 Methods of Body Composition Assessment

## **UNIT-III (8 HOURS)**

- 3.1 Anthropometric Measurements:  
Weight, height, sitting height, chest circumference, thigh circumference, calf circumference, skinfold measurement (biceps, triceps, subscapular, and suprailiac)

## **UNIT – IV (9 HOURS)**

- 4.1 Sports Skill Test-Johnson badminton test, Brady volleyball test, McDonald soccer test, Cornish Handball test, Hockey skill test-SAI hockey Test
- 4.2 Administration of Senior Fitness Test: Chair Stand Test for lower body strength, Chair Sit and Reach Test for lower body flexibility, Back Scratch Test for upper body flexibility, eight foot up and go test for Agility, Six minute walk test

## **PRACTICAL SYLLABUS (30 HOURS)**

- 1. Administration 1 Mile Rock Port Test
- 2. Administration of Fitness Tests
- 3. Measurement of sports skills included in theory course.

## **SUGGESTED READINGS**

- Smith, D.C (2010), Test Measurement and Evaluation in Physical Education and Sports, Sports Education Technologies, New Delhi.
- Balyan Sunita (2006). Sharik Shikshamain Parikshan evmn maapan. Khel Sahitya. Delhi.
- Baumgartner T A Jackson A S Mahar M T and Rowe D A (2007). Measurement for Evaluation in Physical Education. The McGraw Hill Companies. Inc. New York. USA.
- Kansal DK (2012). A practical approach to Measurement Evaluation in Physical

Education & Sports Selection. Sports & Spiritual Science Publications, New Delhi.

- Miller David K (2006). Measurement by the Physical Educator: Why and How. McGraw-Hill. Boston,U.S.A.
- Sharma JP(2006).Test and measurements in physical education. khel sahitya. Delhi

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## SEMESTER-VI

### BSc-PE-DSC-18 (4): FITNESS AND WELLNESS MANAGEMNET

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSC-18 (4): FITNESS AND WELLNESS MANAGEMNET	4	3	0	1	Class XII pass	NIL

**Learning Objectives:** To impart knowledge and practices about the fitness components and Wellness and relation to health

**Learning Outcomes:** After completing the course,

1. The student will understand to analyze and correlate the components of physical fitness, principles of physical fitness, and benefits of fitness programs.
2. The student will comprehend to analyze, correlate, and evaluate regarding fitness profile
3. The student will be able to identify, apply, and correlate different aspects of wellness.
4. The student will comprehend to describe different aspects of behavior modification
5. The student will be able to describe, apply, correlate, and measure different aspects of the daily schedule of achieving quality of life and wellness

### THEORY SYLLABUS (45 HOURS)

#### UNIT-INTRODUCTION TO PHYSICAL FITNESS HOURS)

(10

- 1.1 Concept and meaning of physical fitness
- 1.2 Components of physical fitness
- 1.3 Significance of Physical fitness in the present scenario.
- 1.4 Association of physical inactivity and diseases

## **UNIT-II PHYSICAL FITNESS –DEVELOPMENT AND MAINTENANCE (12HOURS)**

- Benefits of a fitness program
- Elements of fitness program
- Principles and Methods to Develop and Maintain Components of Physical Fitness- Cardiovascular endurance, muscular endurance, strength, flexibility, and balance.
- Body composition-Definition and importance of body composition and ways to manage desired body composition.
- Assessments done before starting a fitness program

## **UNIT-III WELLNESS (12HOURS)**

- 3.1 Definition, Benefits, and Dimensions of Wellness
- 3.2 Adopting a healthy & positive lifestyle in terms of physical activity, Healthy hygienic habits, nutrition for health and prevention of diseases, identifying stressors and management of stress, hazards of substance abuse (smoking, alcohol, tobacco, and drugs)
- 3.3 Importance of rest, sleep, and recreation in daily life

## **UNIT-IV BEHAVIOR MODIFICATION (11 HOURS)**

- 4.1 Barriers to behavior change
- 4.2 Process of change and Stages of behavior change
- 4.3 SMART GOALS
- 4.4 Modifying Daily Schedule for Fitness and Wellness

## **PRACTICAL SYLLABUS (30 HOURS)**

- Physical Fitness Assessment (Any one Method for each component)- cardio-vascular endurance, flexibility, muscular strength, muscular endurance, balance, and body composition.
- A day's scheduling for a healthy lifestyle for any one age group.

- Yogic Practices and Meditation techniques for Stress management

#### **SUGGESTED READINGS:**

- Sharkey,B (2011), Fitness Illustrated, Human Kinetics.
- Thompson,D.L&Howely,T,E(2012),FitnessProfessional'sHandbook,HumanKinetics,Champaign.
- Muller,J.P. (2003) ,Health Exercise and Fitness,Delhi:Sports.
- Thani,Lokesh, (2003) Rules of Game and Games and Fitness,Delhi:Sports,.

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**SEMESTER VI DSE (Choose one from a pool of courses)**

**BSc-PE-DSE-4 (4): Game of Specialization-I - Teaching and Coaching  
(GAME TO BE CONTINUED FROM SEM V)**

**SEMESTER VI  
GAME OF SPECIALIZATION-I -TEACHING AND COACHING  
BSc-PE-DSE-4 (4)-401(i): ATHLETICS**

Course title &Code	Credits	Creditdistributionofthe course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Game of Specialization-I - Teaching and Coaching BSc-PE-DSE-5 (4)- 401(i):ATHLETICS	4	2	0	2	Class XII pass	NIL

**Learning Objectives:** - The learner will be able to use the knowledge of athletics on the track and will have a command of the basic and advanced rules and regulations of marking the track and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

- Officiate and coach athletics
- Identifies the Importance and principles of officiating in athletics, Relation of official and coach with management, players, and spectators
- Understands the Role of the Coach as a Mentor and duties of a coach in general, pre-, during, and postgame
- Understand the Philosophy of Coaching
- Identifies Responsibilities of a coach on and off the field, Psychology of competition, and coaching in athletics
- Fulfill Duties of officials in general, pre-, during and post game,
- Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
- Inculcate Qualities and Qualifications of Coach and Official
- Maintain Integrity and values of sports

## **THEORY SYLLABUS (30 HOURS)**

### **UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in athletics
- Importance and principles of officiating in athletics
- Relation of official and coach with management, players, and spectators
- Measures of improving the standards of officiating and coaching

### **UNIT- II: Coach as a Mentor (8 HOURS)**

- Duties of a coach in general, pre, during, and post-game.
- Philosophy of Coaching
- Responsibilities of a coach on and off the field
- Psychology of competition and coaching in athletics

### **UNIT- III: Duties of Official ( 7 HOURS)**

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

### **UNIT- IV: Qualities and Qualifications of Coach and Official (7 HOURS)**

- Qualities and qualifications of coach and official in athletics
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Field Marking and Dimension of the game

## **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental techniques- throws/jumps/track events (any three).
2. Prepare a teaching /coaching lesson plan on any two advanced techniques -throws/jumps/track events (any three).
3. Demonstration of various techniques related to throws/jumps/track events (any three)



## **SUGGESTED READINGS**

1. Renwick, G.R., (2001) Play Better Athletics, Delhi: Sports Pub.,.
2. Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
3. Handbook-Rules and Regulation. International Athletic Federation (2010).
4. Kumar, Pardeep. (2008). Historical Development of Track & Field. Friends Publication. New Delhi
5. Maughan, R. and Gluson, M. (2004). The Biomechanical Basics of Athletic Performance. Oxford University Press, U.K.
6. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
7. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,

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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSc-PE-DSE-4 (4)-401(ii): BADMINTON**

Course title &Code	Credits	Creditdistributionofthe course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(ii): BADMINTON	4	2	0	2	ClassXII pass	NIL

**Learning Objective:** - The learner will be able to use the knowledge of Badminton on the court and will have a command of the basic and advanced rules and regulations of marking the court and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports

**THEORY SYLLABUS (30 HOURS)**

**UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in badminton

- Importance and principles of officiating in badminton
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### **UNIT- II: Coach as a Mentor (8 HOURS)**

- Duties of a coach in general, pre, during, and post game.
- Philosophy of Coaching
- Responsibilities of a coach on and off the field
- Psychology of competition and coaching in badminton

#### **UNIT- III: Duties of Official (7 HOURS)**

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

#### **UNIT- IV: Qualities and Qualifications of Coach and Official (7 HOURS)**

- Qualities and qualifications of coach and official in badminton
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Field Marking and Dimension of the game

#### **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills

#### **SUGGESTED READINGS**

- Bloss, M.V. et al (2000). Badminton. McGraw Hill, USA.
- Downey J (1990). How to Coach Badminton. Collins Pub. London.
- Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
- Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,

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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(iii):BASKETBALL**

Course title &Code	Credits	Creditdistributionofthe course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION- I- TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(III): <b>BASKETBALL</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Objective:** - The learner will be able to use the knowledge of basketball on the court and will have a command on the basic and advance rules and regulations of marking the court and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports.

## **THEORY SYLLABUS (30 HOURS)**

### **UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in basketball
- Importance and principles of officiating in basketball
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

### **UNIT- II: Coach as a Mentor (8 HOURS)**

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

### **UNIT- III: Duties of Official (7 HOURS)**

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

### **UNIT- IV: Qualities and Qualifications of Coach and Official (7 HOURS)**

- Qualities and qualification of coach and official in basketball
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Field Marking and Dimension of the game

## **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills

### 3. Demonstration of various attacking and defensive drills

#### **SUGGESTED READINGS**

- Jain, (2003) Naveen Play and Learn Basket Ball, Khel Sahitya Kendra, New Delhi-
- Sharma O.P. (2003) Basket Ball Skills and Rules, Khel Sahitya Kendra Delhi-
- Thani, Yograj, (2002) Coaching Successfully Basket Ball, Sports Publisher, Delhi-.
- Drewett, J. (2007). How to Improve at Basketball. Crab Tree Publishing Co., USA.
- Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
- Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,
- Wilmore & Costill (2004). Physiology of Sports & Exercise. Human Kinetics, US.

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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(iv): CRICKET**

Course title &Code	Credits	Creditdistributionofthecourse			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION- I- TEACHING AND COACHING BSC- PE-DSE-4 (4)- 401(iv): <b>CRICKET</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>ClassXII pass</b>	<b>NIL</b>

**Learning Objective:** - The learner will be able to use the knowledge of Cricket on the ground and will have a command on the basic and advance rules and regulations of marking the ground and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

- Officiate and coach the game/sports
- Officiate in the sports/games
- Identifies Relation of official and coach with management, players and spectators
- Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
- Understand Philosophy of coaching
- Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
- Fulfill Duties of official in general, pre, during and post game,
- Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
- Inculcate Qualities and Qualifications of Coach and Official
- Maintain Integrity and values of sports

**THEORY SYLLABUS (30 HOURS)**



#### UNIT- I: Introduction of Officiating and Coaching **(8 HOURS)**

- Concept of officiating and coaching in cricket
- Importance and principles of officiating in cricket
- Relation of official and coach with management, players ,and spectators
- Measures of improving the standards of officiating and coaching

#### UNIT- II: Coach as a Mentor **(8 HOURS)**

- Duties of a coach in general, pre, during, and post-game.
- Philosophy of Coaching
- Responsibilities of a coach on and off the field
- Psychology of competition and coaching in cricket

#### UNIT- III: Duties of Official **(7 HOURS)**

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

#### UNIT- IV: Qualities and Qualifications of Coach and Official **(7 HOURS)**

- Qualities and qualifications of coach and official in cricket
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Field Marking and Dimension of the game

#### **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills

## **SUGGESTED READINGS**

- Amarnath M. (1996). Learn to Play Good Cricket. UBS Publishers New Delhi.
- Boycott, G. (2010). Play Cricket the Right Way. Great Northern Books Limited, U.K.
- Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
- Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,

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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(v): FOOTBALL**

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION- I- TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(v): FOOTBALL	4	2	0	2	Class XII pass	NIL

**Learning Objective:** - The learner will be able to use the knowledge of Football on the ground and will have a command on the basic and advance rules and regulations of marking the ground and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

- Officiate and coach the game/sports
- Officiate in the sports/games
- Identifies Relation of official and coach with management, players and spectators
- Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
- Understand Philosophy of coaching
- Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
- Fulfill Duties of official in general, pre, during and post game,
- Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
- Inculcate Qualities and Qualifications of Coach and Official
- Maintain Integrity and values of sports

**THEORY SYLLABUS (30 HOURS)**

#### **UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Football
- Importance and principles of officiating in football
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### **UNIT- II: Coach as a Mentor (8 HOURS)**

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

#### **UNIT- III: Duties of Official (7 HOURS)**

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

#### **UNIT- IV: Qualities and Qualifications of Coach and Official (7 HOURS)**

- Qualities and qualification of coach and official in football
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments
- Integrity and values of sports
- Field Marking and Dimension of the game

#### **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills

#### **SUGGESTED READINGS**

1. N. Kumar, (2003) Play and Learn Football, New Delhi: K.S.K.,.
2. Sharma, O.P.,(2001) Teaching and Coaching –Football, Delhi: Khel S.K.,.
3. Thani, Yograj, (2002) Coaching Successfully Football, New Delhi: K.S.K.,.

4. Carling, C., Williams, M. and Reilling, T. (2006). Handbook of Soccer MatchAnalysis: A Systematic Approach to Improving Performance. Routledge Publishers ,USA.
5. Long, H. and Czarnecki, J. (2007). Football for Dummies. For Dummies Publisher, USA.Developing Strength, Speed and Endurance. Routledge Publisher, USA.
6. Reilly, T., and J.C.D. Arau (2008). Science and Football V: The Proceedings of the5th World Congress on Sports Science and Football, Volume 5.
7. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7
8. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7
9. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

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## SEMESTER VI

### GAME OF SPECIALIZATION-I- TEACHING AND COACHING

#### BSC-PE-DSE-4 (4)-401(vi): GYMNASTICS

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Pre- requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION- I- TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(vi): GYMNASTICS	4	2	0	2	ClassXII pass	NIL

**Learning Objective:** - The learner will be able to use the knowledge of Gymnastics on the floor and will have a command of the basic and advanced rules and regulations of marking the floor and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports

## **THEORY SYLLABUS (30 HOURS)**

### **UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Gymnastics
- Importance and principles of officiating in Gymnastics
- Relation of official and coach with management, players, and spectators
- Measures of improving the standards of officiating and coaching

### **UNIT- II: Coach as a Mentor (8 HOURS)**

- Duties of a coach in general, pre-, during, and post-game.
- Philosophy of Coaching
- Responsibilities of a coach on and off the field
- Psychology of competition and coaching in Gymnastics

### **UNIT- III: Duties of Official (7 HOURS)**

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

### **UNIT- IV: Qualities and Qualifications of Coach and Official (7 HOURS)**

- Qualities and qualification of coach and official in Gymnastics
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports

## **PRACTICAL SYLLABUS (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of techniques of Gymnastics (any three)

## **SUGGESTED READINGS**

1. Code of Points Trampoline Gymnastics, Federation Int. De Gymnastics, 2005.
2. Federation Internationale Gymnastics, Federation Int. De Gymnastics, 2006.
3. Jain, R., (2005) Play and Learn Gymnastics, Khel Sahitya Kendra,.
4. Jain, R., (2003) Play and Learn Gymnastics, New Delhi: Khel Sahitya Kendra,.
5. Brown (2009). How to Improve at Gymnastics. Crab tree Publishing Co., USA.
6. Stick land, L.R. (2008). Gender Gymnastics. Trans Pacific Press, Japan.
7. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
8. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,
9. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(vii): HANDBALL**

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Pre- requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION- I- TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(vii):- HANDBALL	4	2	0	2	CLASS XII PASS	NIL

**Learning Objective:** - The learner will be able to use the knowledge of Handball on the ground and will have a command on the basic and advance rules and regulations of marking the ground and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports

**THEORY SYLLABUS (30 HOURS)**

#### **UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Handball
- Importance and principles of officiating in Handball
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### **UNIT- II: Coach as a Mentor (8 HOURS)**

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

#### **UNIT- III: Duties of Official (7 HOURS)**

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

#### **UNIT- IV: Qualities and Qualifications of Coach and Official (7 HOURS)**

- Qualities and qualification of coach and official in Handball
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Field Marking and Dimension of the game

#### **PRACTICAL SYLLABUS (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills

#### **SUGGESTED READINGS**

1. Jain, D., Play & Learn Handball, New Delhi, Khel Sahitya Kendra, 2003.

2. Jain D (2003). Play & Learn Handball. Khel Sahitya Kendra. New Delhi.
3. Kleinman, I. (2009). Complete Physical Education Plans. 2<sup>nd</sup> Ed. Human Kinetics, USA.
4. Surhone, L.M. et.al, (2010). Team Handball. Betascript Publishing, USA
5. Phillips, B.E. (2009). Fundamental Handball. Kessinger Publishers, USA.
6. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
7. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,
8. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(VIII):HOCKEY**

Course title &Code	Credits	Creditdistributionofthecourse			Eligibility criteria	Prerequisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION- I- TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(viii):HOCKEY	4	2	0	2	Class XII pass	NIL

**Learning Objective:** - The learner will be able to use the knowledge of Hockey on the field and will have a command on the basic and advance rules and regulations of marking the field and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports
11. Prepare a teaching /coaching lesson plan
12. Demonstrate various attacking and defensive drills.

**THEORY SYLLABUS (30 HOURS)**

#### **UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Hockey
- Importance and principles of officiating in Hockey
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### **UNIT- II: Coach as a Mentor (8 HOURS)**

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

#### **UNIT- III: Duties of Official (7 HOURS)**

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

#### **UNIT- IV: Qualities and Qualifications of Coach and Official (7 HOURS)**

- Qualities and qualification of coach and official in Hockey
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Field Marking and Dimension of the game

#### **PRACTICAL SYLLABUS (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills

#### **SUGGESTED READINGS**

1. Umpires. India, International Hockey Federation, 2003.

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3. Narang, P., Play & Learn Hockey, Khel Sahitya Kendra, New Delhi, 2003
4. Thani Yograj., Coaching Successfully Hockey, Delhi, Sports Publication, 2002.
5. Walter, R. and Johnson, M. (2009). Hockey Plays and Strategies. Human Kinetics, USA.
6. Pecknold, R. and Foeste, A. (2009). Hockey: Essential Skills. McGraw Hills, USA.
7. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
8. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,
9. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(ix): JUDO**

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION- I- TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(ix): JUDO	4	2	0	2	Class XII pass	NIL

**Learning Objective:** - The learner will be able to use the knowledge of Judo in the Dojo and will have a command on the basic and advance rules and regulations of marking the Dojo and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports
11. Prepare a teaching /coaching lesson plan
12. Demonstrate various attacking and defensive drills..

**THEORY SYLLABUS (30 HOURS)**

#### **UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Judo
- Importance and principles of officiating in Judo
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### **UNIT- II: Coach as a Mentor (8 HOURS)**

- Duties of coach in general, pre, during and post game.
- Philosophy of coaching
- Responsibilities of a coach on and off the Dojo
- Psychology of competition and coaching in Judo

#### **UNIT- III: Duties of Official (7 HOURS)**

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

#### **UNIT- IV: Qualities and Qualifications of Coach and Official (7 HOURS)**

- Qualities and qualification of coach and official in Judo
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Dojo Marking and Dimension of the game in Judo

#### **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills

#### **SUGGESTED READINGS**

1. Harrison, E.J.,( 2002) Coaching Successfully Judo, Delhi: Sports,.



2. Jain, D., (2003) Play and Learn Judo, New Delhi: Khel Sahitya Kendra,.
3. Putin, V, Shestakov, V. ad evitsky, A.(2004). Judo: History, Theory and Practice. Blue Snake Books, Moscow.
4. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
5. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.

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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(X): KABADDI**

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION-I-TEACHING AND COACHINGBSC-PE-DSE-4 (4)-401(X):KABADDI	4	2	0	2	Class XII pass	NIL

**Learning Objective:** - The learner will be able to use the knowledge of Kabaddi on the court and will have a command on the basic and advance rules and regulations of marking the court and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports
11. Prepare a teaching /coaching lesson plan
12. Demonstrate various attacking and defensive drills.

**THEORY SYLLABUS (30 HOURS)**

**UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Kabaddi
- Importance and principles of officiating in Kabaddi
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### UNIT- II: Coach as a Mentor **(8 HOURS)**

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

#### UNIT- III: Duties of Official **(7 HOURS)**

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

#### UNIT- IV: Qualities and Qualifications of Coach and Official **(7 HOURS)**

- Qualities and qualification of coach and official in Kabaddi
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Field Marking and Dimension of the game

#### **PRACTICAL SYLLABUS (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various techniques in kabaddi (any three)

#### **SUGGESTED READINGS**

1. Kumar, Dharmander. (2018). Kabaddi and It's Playing Techniques. Writers Choice, New Delhi.
2. Kumar, Dharmander. (2023). Kabaddi Dynamics: Skill, Technics, Tactics & Science, Khel Sahitya Kendra, New Delhi.
3. Mishra, S.C. (2007). Teach Yourself Kabaddi. Sports Publications, New Delhi.

4. Syal, M. (2004). Kabaddi Teaching. Prerna Parkashan, New Delhi.
5. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi.
6. S.C. (2007). Teach Yourself Kabaddi. Sports Mishra Publications, New Delhi.
7. Rao CV (1983). Kabaddi. Native Indian Sports. NSNIS. Patiala Publisher
8. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
9. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(XI): KHO-KHO**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION-I- TEACHING AND COACHING BSC-PE-DSE-4 (4)-401(XI):KHO-KHO	4	2	0	2	Class XII pass	NIL

**Learning Objectives:** - The learner will be able to use the knowledge of Kho-Kho on the ground and will have a command on the Teaching and Coaching of the subject.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports
11. Prepare a teaching /coaching lesson plan
12. Demonstrate various attacking and defensive drills.

**THEORY SYLLABUS (30 HOURS)**

**UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Kho-Kho
- Importance and principles of officiating in Kho-Kho
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### UNIT- II: Coach as a Mentor **(8 HOURS)**

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

#### UNIT- III: Duties of Official **(7 HOURS)**

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

#### UNIT- IV: Qualities and Qualifications of Coach and Official **(7 HOURS)**

- Qualities and qualification of coach and official in Kho-Kho
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Field Marking and Dimension of the game

#### **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills (any three)

#### **SUGGESTED READINGS**

1. Chakrabarty, G., Kho - Kho Aveloken, Delhi, Khel Sahitya Kendra, 2002.
2. Panday, L., Kho - Kho Sarvaswa, New Delhi Metropolitan, 1982.\
3. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,

4. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,
5. Vanaik A. (2005). Playfield Manual, Friends Publication. New Delhi
6. Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(XII): VOLLEYBALL**

Course title &Code	Credits	Creditdistributionofthe course			Eligibility criteria	Pre- requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION- I- TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(XII):VOLLEYB ALL	4	2	0	2	ClassXII pass	NIL

**Learning Objectives:** - The learner will be able to use the knowledge of Volleyball on the court and will have a command on the basic and advance rules and regulations of marking the court and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports
11. Prepare a teaching /coaching lesson plan
12. Demonstrate various attacking and defensive drills.

**THEORY SYLLABUS (30 HOURS)**



#### **UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Volleyball
- Importance and principles of officiating in Volleyball
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### **UNIT- II: Coach as a Mentor (8 HOURS)**

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

#### **UNIT- III: Duties of Official (7 HOURS)**

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

#### **UNIT- IV: Qualities and Qualifications of Coach and Official (7 HOURS)**

- Qualities and qualification of coach and official in Volleyball
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Field Marking and Dimension of the game in Volleyball

#### **PRACTICAL SYLLABUS (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills in Volleyball.

#### **SUGGESTED READINGS**

1. The National Alliance for Youth. Sports (2009). Coaching Volleyball

For Dummies Publishers, USA.

2. Volleyball, USA (2009). Volleyball: Systems and Strategies. Human Kinetics, USA.
3. Bompa O. Tudor and Halff G. Gregory. (2009) "Periodization Theory and Methodology of Training" Human kinetics. NY.
4. Kenny, B. and Gregory, C. (2006). Volleyball: Steps to Success. Human Kinetics, USA.
5. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(XIII): YOGA**

Course title &Code	Credits	Creditdistributionofthe course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION- I- TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(XIII): YOGA	4	2	0	2	ClassXII pass	NIL

**Learning Objectives:** - The learner will be able to use the knowledge of Yoga and will have a command on the basic and advance rules and regulations and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports
11. Prepare a teaching /coaching lesson plan
12. Demonstrate of various Meditation, Shat Kriya (any two)

## **THEORY SYLLABUS (30 HOURS)**

### **UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Yoga
- Importance and principles of officiating in Yoga
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

### **UNIT- II: Coach as a Mentor (8 HOURS)**

- Duties of coach in general, pre, during and post game.
- Philosophy of coaching
- Responsibilities of a coach on and off the field of yoga
- Psychology of competition and coaching in Yoga

### **UNIT- III: Duties of Official (7 HOURS)**

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

### **UNIT- IV: Qualities and Qualifications of Coach and Official (7 HOURS)**

- Qualities and qualifications of coach and official in Yoga
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of yoga sports

## **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various Meditation, Shat Kriya (any two)

## **SUGGESTED READINGS**

1. Kaminoff, L. et al (2007). Yoga Anatomy. Human Kinetics, USA.
2. Kirk, M. (2005). The Hatha Yoga Illustrated. Human Kinetics, USA.
3. Sharma JP and Ganesh S(2007). Yog Kala Ek Prichya. Friends Publication. New Delhi
4. Sharma J. P. (2007). Manav Jeevan evam yoga. Friends Publication. New Delhi.
5. Sharma Jai Prakash and Rathore Bhupender Singh (2007). Yoga Ke Tatva. Friends Publication. Delhi
6. Mukerji, A.P. (2010). The Doctrine and Practice of Yoga. General Books, LLC, New Delhi.
7. Norton, W.W. (2010). Yoga for Osteoporosis: The Complete Guide. W.W. Norton & Company, USA.
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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSc-PE-DSE-4 (4)-401(xiv): SWIMMING**

Course title &Code	Credits	Creditdistributionofthe course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(xiv): SWIMMING	4	2	0	2	Class XII pass	NIL

**Learning Objective:** - The learner will have knowledge of Swimming and will have a command of the basic and advanced rules and regulations of Swimming and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

11. Officiate and coach the game/sports
12. Officiate in the sports/games
13. Identifies Relation of official and coach with management, players and spectators
14. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
15. Understand Philosophy of coaching
16. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
17. Fulfill Duties of official in general, pre, during and post game,
18. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
19. Inculcate Qualities and Qualifications of Coach and Official
20. Maintain Integrity and values of sports

**THEORY SYLLABUS (30 HOURS)**

**UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Swimming
- Importance and principles of officiating in Swimming

- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### UNIT- II: Coach as a Mentor **(8 HOURS)**

- Duties of a coach in general, pre, during, and post game.
- Philosophy of Coaching
- Responsibilities of a coach on and off the Pool Area
- Psychology of competition and coaching in Swimming

#### UNIT- III: Duties of Official **(7 HOURS)**

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

#### UNIT- IV: Qualities and Qualifications of Coach and Official **(7 HOURS)**

- Qualities and qualifications of coach and official in Swimming
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Pool Marking and Dimension of the game

#### **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills

#### **SUGGESTED READINGS**

- 1.Jain. D. (2003). “Swimming Skills & Rules” Khel Sahitya Kendra, New Delhi, India
- 2.Hardy, Colin (1987) “Handbook for the Teacher Of Swimming” Pelham books ltd., London (U.K)
- 3.Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of

Training” Human kinetics. NY.

4.Thomas, David G., (2005). “Swimming STEPS TO SUCCESS” Human Kinetics, U.S.A

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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSC-PE-DSE-4 (4)-401(xv): WRESTLING**

Course title &Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
GAME OF SPECIALIZATION- I- TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(xv): WRESTLING	4	2	0	2	Class XII pass	NIL

**Learning Objective:** - The learner will be able to use the knowledge of Wrestling and will have a command on the basic and advance rules and regulations of Wrestling and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports
11. Prepare a teaching /coaching lesson plan
12. Demonstrate various attacking and defensive drills..

**THEORY SYLLABUS (30 HOURS)**

#### UNIT- I: Introduction of Officiating and Coaching **(8 HOURS)**

- Concept of officiating and coaching in Wrestling
- Importance and principles of officiating in Wrestling
- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### UNIT- II: Coach as a Mentor **(8 HOURS)**

- Duties of coach in general, pre, during and post game.
- Philosophy of coaching
- Responsibilities of a coach on and off the Wrestling Ring
- Psychology of competition and coaching in Wrestling

#### UNIT- III: Duties of Official **(7 HOURS)**

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

#### UNIT- IV: Qualities and Qualifications of Coach and Official **(7 HOURS)**

- Qualities and qualification of coach and official in Wrestling
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Marking and Dimension of the field/ring in Wrestling

#### **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills

## SUGGESTED READINGS

1. Gable, D. (1999) "Coaching Wrestling Successfully" Human Kinetics, U.S.A
2. Camaione D. & Tillman K. (1980) "Teaching & Coaching Wrestling A Scientific Approach" John Wiley & Sons. Inc., U.S.A.
3. Kumar N. (2005) "Play & Learn Wrestling" Khel Sahitya Kendra, New Delhi, India.
4. Patwardhan G. (2002) "Coaching Successfully Wrestling" Sports Publication, Delhi.
5. Bompa O. Tudor and Half G. Gregory. (2009) "Periodization Theory and Methodology of Training" Human kinetics. NY.
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7. Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,
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**SEMESTER VI**  
**GAME OF SPECIALIZATION-I- TEACHING AND COACHING**  
**BSc-PE-DSE-4 (4)-401(xvi): TABLE TENNIS**

Course title &Code	Credits	Creditdistributionofthe course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
TEACHING AND COACHINGBSC- PE-DSE-4 (4)- 401(xvi): <b>TABLE TENNIS</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Class XII pass</b>	<b>NIL</b>

**Learning Objective:** - The learner will be able to use the knowledge of Table Tennis on the court and will have a command of the basic and advanced rules and regulations of marking the court and conducting a tournament.

**Learning Outcomes:** After completing the course, the students will be able to:

1. Officiate and coach the game/sports
2. Officiate in the sports/games
3. Identifies Relation of official and coach with management, players and spectators
4. Understands Role of Coach as a Mentor, Duties of coach in general, pre, during and postgame
5. Understand Philosophy of coaching
6. Identifies Responsibilities of a coach on and off the field, Psychology of competition and coaching in athletics
7. Fulfill Duties of official in general, pre, during and post game,
8. Understand Philosophy of officiating, Mechanics of officiating- position, singles and movement etc., Ethics of officiating in athletics,
9. Inculcate Qualities and Qualifications of Coach and Official
10. Maintain Integrity and values of sports

**THEORY SYLLABUS (30 HOURS)**

**UNIT- I: Introduction of Officiating and Coaching (8 HOURS)**

- Concept of officiating and coaching in Table Tennis
- Importance and principles of officiating in Table Tennis

- Relation of official and coach with management, players and spectators
- Measures of improving the standards of officiating and coaching

#### UNIT- II: Coach as a Mentor **(8 HOURS)**

- Duties of a coach in general, pre, during, and post game.
- Philosophy of Coaching
- Responsibilities of a coach on and off the field
- Psychology of competition and coaching in Table Tennis

#### UNIT- III: Duties of Official **(7 HOURS)**

- Duties of officials in general, pre, during and post-game.
- Philosophy of officiating
- Mechanics of officiating- position, singles and movement, etc.
- Ethics of officiating in Table Tennis

#### UNIT- IV: Qualities and Qualifications of Coach and Official **(7 HOURS)**

- Qualities and qualifications of coach and official in Table Tennis
- General rules of games and sports
- Eligibility rules of intercollegiate and inter-university tournaments,
- Integrity and values of sports
- Field Marking and Dimension of the game

#### **PRACTICAL (60 HOURS)**

1. Prepare a teaching /coaching lesson plan on any two fundamental skills
2. Prepare a teaching /coaching lesson plan on any two advanced skills
3. Demonstration of various attacking and defensive drills

#### **SUGGESTED READINGS**

- Bompa O. Tudor and Halff G. Gregory. (2009) “Periodization Theory and Methodology of Training” Human kinetics. NY.
- Jain D. (2001) “ Teaching& Coaching Table Tennis” Khel Sahitya Kendra, Delhi.

- Burn B. (1979) “ The Science of Table Tennis” S. Chand & Company ltd., N. Delhi.
- Jain D. (2003) “Table Tennis skills & Rules” Khel Sahitya Kendra, N. Delhi.
- Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol I), Friends Publications (India), ISBN: 978-93-5978-893-7,
- Tyagi S., Vanaik A, (2023) The Art and Science of Sports Coaching, (Vol II), Friends Publications (India), ISBN: 978-93-5978-893-7,
- Vanaik A. (2017). Officiating and Coaching, Friends Publication. New Delhi

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## SEMESTER-VI

### BSc-PE-DSE-4(4)-402: RESEARCH METHODS IN PHYSICAL EDUCATION AND SPORTS

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-4(4)-402: RESEARCH METHODS IN PHYSICAL EDUCATION AND SPORTS	4	3	1	0	Class XII pass	NIL

**Learning Objective:** The student will gain knowledge about Research Methods of sampling, writing of Research Reports and analysis of the data through statistical techniques.

**Learning Outcome:**

1. The student will be able to use the knowledge of Research for analysis of data and leading to logical conclusion on any field of investigation.
2. The student will learn the Research: Nature, Unscientific vs. scientific methods of problem-solving, Ethical Issues in Research, Identification and criteria in selecting a Research Problem, defining and delimiting problem, and Literature review: Purpose, Literature search methods, steps of literature review, major literature sources.
3. The student will develop an understanding of Sampling (Random, cluster, stratified), Survey:- Survey by Questionnaire and survey by Interview, Experimental Methods:- Relationship studies, Comparative Studies and Control of experimental factors and Instrumentation.
4. The student will gain knowledge of the Research proposal, Organization of the Thesis report, Research article, oral and poster presentation, Table, figure, and bibliography.
5. The student will learn about the Types of data, Measures of central tendency (mean, median, and mode), Measures of variability (range and standard deviation), numerical problems to be solved from raw data, Tests for measuring correlation (Product moment

correlation) and differences (Independent T-test), numerical problems to be solved from raw data, plotting of graphs and chart.

## **THEORY SYLLABUS (45 HOURS)**

### **UNIT 1 Introduction to Research in Physical Education (10HOURS)**

1.1 Research: Nature, Unscientific vs. scientific methods of problem-solving, Ethical Issues in Research.

1.2 Identification and criteria in selecting a Research Problem, defining and delimiting the problem.

1.3 Literature review: Purpose, Literature search methods, steps of literature review, major literature sources.

1. 4 Statistical concepts: Importance of statistics in Physical Education, ways to select a sample.

### **UNIT 2 Research Methods (10HOURS)**

2.1 Sampling (Random, cluster, stratified)

2.2 Survey:- Survey by Questionnaire and Survey by Interview

2.3 Experimental Methods: - Relationship studies, Comparative Studies and Control of experimental factors.

2.4 Instrumentation

### **UNIT 3 Writing the Research Report (12 HOURS)**

3.1 Research proposal

3.2 Organization of the Thesis Report

3.3 Research article, oral and poster presentation

3.4 Table, figure, bibliography.

### **UNIT 4 Statistical Concepts in Research (13 HOURS)**

4.1 Types of data

4.2 Measures of central tendency (mean, median and mode), Measures of variability (range and standard deviation), numerical problems to be solved from raw data.

4.3 Tests for measuring correlation (Product moment correlation) and differences (Independent T-test), numerical problems to be solved from raw data, and plotting of graphs and charts.



### **SUGGESTED READINGS:**

- Koul, L. (2002). Methodology of Educational Research, Vikas Publishing House, New Delhi.
- Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
- Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
- Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications
- Silverman, S.J. & Nelson, K.J. & Thomas, R.J. (2011), Research Methods in Physical Activity, Human Kinetics, Champaign.
- Sharma, L. & Nayar, K (2015), Dictionary of Terms in Research Methodology, The Readers Paradise, New Delhi.
- Kumar, S (2018). Research Methodology : A Step By Step Guide for Beginners, Yking Books, Jaipur.

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## SEMESTER – VI

### BSc-PE-DSE-4(4): 403 SPORTS FIELD TECHNOLOGY

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
BSc-PE-DSE-4(4): 403 SPORTS FIELD TECHNOLOGY	4	3	1	0	Class XII pass	NIL

**Learning Outcome:** - The learner will be able to use the knowledge of Yoga and will have a command of the basic and advanced rules and regulations and conducting a tournament.

**Learning Objectives:-**

1. The student will understand Technical preparation, Marking, Physical, physiological, psychological, and sociological characteristics Technical Preparation for Focused Events, Required motor abilities and their technical preparation, Technical and tactical preparation, Physical, physiological, psychological and sociological characteristics of athletes
2. The student will comprehend Structure and organization of the meet Budgeting, purchase of equipment Preparation, execution, and conclusion of the respective events Protocols and ceremonies
3. The student will apprehend how a particular instrument is made and how it is used.

### THEORY SYLLABUS (45 HOURS)

#### UNIT I – Sports Technology (12 HOURS)

- 1.1 Meaning and definition of sports technology.
- 1.2 Significance of technology in sports
- 1.3 General Principles of instrumentation in sports.
- 1.4 Meaning of Foams, Types of foams (Polyurethane, Polystyrene, Styrofoam, closed-cell, open-cell foams, and Neoprene) and their uses in different sports.

## **UNIT II – Nanotechnology in Sports Materials (12 HOURS)**

- 2.1 Meaning and Definition of Nanotechnology
- 2.2 Meaning of nano glue and nano molding technology.
- 2.3 Uses and Benefits of Nanotechnology in sports uniforms, and Safety equipment
- 2.4 Uses and Benefits of Nanotechnology in Sports equipment and playing surfaces

## **UNIT III – Surfaces of Playfields and Measuring Gadgets (10 HOURS)**

- 3.1 Method of construction and installation for Synthetic and Cinder tracks.
- 3.2 Meaning and types of flooring materials for different sports: synthetic (polyurethane and poly grass) and wooden.
- 3.4 Modern Measuring Equipment Used in Running, Throwing, and Jumping Events.

## **UNIT IV – Modern Stadiums and Training Machines (11 HOURS)**

- 4.1 Identifying requirements of indoor and outdoor playfields
- 4.2 Tennis: Serving Machine, Mechanism and Advantages
- 4.3 Dimensions of Sports Infrastructure - Gymnasium, Pavilion, Swimming Pool, Indoor Stadium and Outdoor Stadium.
- 4.4 Lighting Facilities: Method of erecting and luminous in indoor and outdoor stadiums. Methods of measuring luminous.

## **SUGGESTED READINGS**

1. Finn, R.A. and Trojan P.K. (1999) “Engineering Materials and their Applications” UK: Jaico Publisher.
2. John Mongilo, (2001), “Nano Technology 101 “New York: Green wood publishing group. Walia,
3. Principles and Methods of Education (Paul Publishers, Jullandhar), 1999.

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