

**Appendix-63**  
**Resolution No. 38 {38-1 [38-1-5(4)]}**

INDEX

SEMESTER-I & II

UGCF for Courses of Study with more than One Core Discipline  
(Earlier B.A. Prog.) Bachelors of Physical Education in the Field  
of Multidisciplinary Study (Hons.) (2022-23)

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## APPENDIX-3

UGCF for Courses of Study with more than One Core Discipline (Earlier B.A. Prog.)

Bachelors of Physical Education in the Field of Multidisciplinary Study (Hons.)

Semesterr	Core(DSC)	Electiv e(DSE)	Generic Elective (GE)	Ability Enhancement Course (AEC)	Skill Enhancement t Course (SEC)	Internshi p/ Apprenti ceship / Project (2)	Value addition course (VAC)	Total Credits
I	<p style="background-color: #ADD8E6;">DSC-1 (A/B):</p> <p style="background-color: #FFFF00;">Discipline A1-(4) : B.A.-P.E-DSC-1-(4)-1.1- History and Foundations of Physical Education</p> <p>Discipline B1-(4) B.A.-P.E-DSC-1-(4)-1.2- Structure and Functions of Sports Bodies/ Organizations</p>		Choose one from a pool of GE Languages - Language-1*GE-1 (4)	Choose one from a pool of AEC courses (2)	Choose one from a pool of courses (2): B.A.-PE-SEC-1-(2)- Games & Sports (Any one of the Team Games)## B.A.-PE-SEC-1-(2)-1.1-Basketball B.A.-PE-SEC-1-(2)-1.2-Cricket B.A.-PE-SEC-1-(2)-1.3-Football B.A.-PE-SEC-1-(2)-1.4-Handball B.A.-PE-SEC-1-(2)-1.5-Hockey B.A.-PE-SEC-1-(2)-1.6-Kabaddi B.A.-PE-SEC-1-(2)-1.7-Kho-Kho B.A.-PE-SEC-1-(2)-1.8-Volleyball		Choose one from a pool of courses (2): B.A.-PE-VAC-1-(2)  Olympism/Sport s for Global Peace and Value Education	22 Credits

II	<p>DSC-2 (A/B):</p> <p>Discipline A2-(4): B.A.-PE-DSC-2-(4)-2.1- Anatomy and Physiology</p> <p>Discipline B2-(4) B.A.-PE-DSC-2-(4)- 2.2- Exercise Physiology</p>		Choose one from a pool of GE Languages - Language-2*GE-2 (4)	Choose one from a pool of AEC courses (2)	<p>Choose one from a pool of courses (2): B.A.-PE-SEC-2-(2) -</p> <p>Games &amp; Sports (Any one of the Individual Sports)### B.A.-PE-SEC-2-(2)-2.1-Athletics B.A.-PE-SEC-2-(2)-2.2-Badminton B.A.-PE-SEC-2-(2)-2.3-Gymnastics B.A.-PE-SEC-2-(2)-2.4-Judo B.A.-PE-SEC-2-(2)-2.5-Yoga</p>		<p>Choose one from a pool of courses (2): B.A.-PE-VAC-2-(2)</p> <p>Physical Activity Literacy</p>	22 Credits
<b>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>								<b>Total=44</b>

III	DSC-3 (A/B):		Choose one from a pool of GE Languages - Language-3*GE-3 (4)	Choose one from a pool of AEC courses (2)	Choose one SEC or Internship/Apprenticeship/Project/Community Outreach (IAPC) (2):-SEC -(1) - B.A.-PE-SEC-3-(2)-  Community Wellness Programmes	Choose one from a pool of courses (2): B.A.-PE-VAC-3-(2)-  Yoga for Human Development	22 Credits
	Discipline A3-(4): B.A.-PE-DSC-3-(4)-3.1- Health Education						
	Discipline B3-(4) B.A.-PE-DSC-3-(4)-3.2- Sports Nutrition and Ergogenic Aids						
IV	DSC-4 (A/B):		Choose one from a pool of GE Languages - Language-4*GE-4 (4)	Choose one from a pool of AEC courses (2)	Choose one SEC or Internship/Apprenticeship/Project/Community Outreach (IAPC) (2) - B.A.-PE-SEC-4-(2)-  Exercise is Medicine	Choose one from a pool of courses (2): B.A.-PE-VAC-4-(2)-  Sports Volunteerism for Good Citizenship	22 Credits
	Discipline A4-(4): B.A.-PE-DSC-4-(4)-4.1- Athletic Care and Rehabilitation						
	Discipline B4-(4) B.A.-PE-DSC-4-(4)-4.2- Correctives in Physical Education						
<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>Total=88</b>
V	DSC-5 (A/B)	Choose one from a pool	Choose one from a pool of		Choose one SEC or Internship/Apprenticeship/		22 Credits

<p>Discipline A5-(4): B.A.-PE-DSC-5-(4)-5.1- Sports Psychology</p>	<p>of courses DSE-1 A/B- (4): – B.A.-PE- DSE-(4)-1.1- Sports Training; B.A.-PE- DSE-(4)-1.2- Strength and Conditioning ; B.A.-PE- DSE-(4)-1.3- Fitness for Senior Citizens</p>	<p>courses GE-5 (4): B.A.-PE-GE- 5-(4)- Yoga and Stress Management</p>	<p>Project/Research/ Community Outreach (2): SEC-(2) B.A.–PE-SEC-5-(2)-  Fitness-Sports Industry and Marketing</p>	
<p>Discipline B5-(4) B.A.-PE-DSC-5-(4)-5.2- Sports Sociology</p>				

VI	DSC-6 (A/B):	Choose one from a pool of courses DSE-2 A/B- (4): B.A.-PE-DSE-6-(4)-2.1- Research Methods in Physical Education and Sports; B.A.-PE-DSE-(4)-2.2- Publication Ethics in Physical Education and Sports Sciences: B.A.-PE-DSE-(4)-2.3- Thesis Writing in Physical Education and Sports	Choose one from a pool of courses GE-6 (4): B.A.-PE-GE-6-(4)- Obesity and Weight Managementt	Choose one SEC or Internship/Apprenticeship/ Project/Research/ Community Outreach (2): B.A. -PE-SEC-6-(2)-  Sports Event Management					22 Credits
	Discipline A6-(4): B.A.-PE-DSC-6-(4)-6.1- Kinesiology								
Students on exit shall be awarded Bachelor of (in the field of Multidisciplinary Study) after securing the requisite 132credits on completion of Semester VI									Total=132
VII	DSC-13 (4): B.A.-PE-DSC-(4)- Organization and	Choose three DSE (3X4) course <b>OR</b> Choose two DSE-						Dissertation on Major <b>OR</b>	22 Credits

<p>Administration in Physical Education</p>	<p>(2X4) and one GE COURSE <b>OR</b> Choose one DSE (4) and two GE (2x4) courses (total=12):</p> <p>B.A.-PE-DSE-(4)-3.1- Sports Management,</p> <p>B.A.-PE-DSE-(4)-3.2- Sports Pedagogy,</p> <p>B.A.-PE-DSE-(4)-3.3- Sports Economics,</p> <p>B.A.-PE-DSE-(4)-3.4- Sports Journalism,</p> <p>B.A.-PE-DSE-(4)-3.5- Sports Statistics,</p> <p>B.A.-PE-DSE-(4)-3.6- Lifestyle and Fitness ;</p> <p><b>GE:</b></p> <p>B.A.-PE-GE-(4)-3.1- Sports for Leisure and Recreation,</p> <p>B.A.-PE-GE-(4)-3.2- Gym Management</p>				<p>Dissertation on Minor <b>OR</b> Academic Project/ Entrepreneurship (6)</p>	
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VII I	DSC-14 (4): B.A.-PE-DSC-(4)- Test, Measurement and Evaluation in Physical Education	Choose three DSE (3X4) course <b>OR</b> Choose two DSE- (2X4) and one GE (4) COURSE <b>OR</b> Choose one DSE (4) and two GE (2x4) courses(total=12): DSE:  B.A.-PE-DSE-(4)-4.1- Sports Biomechanics,  B.A.-PE-DSE-(4)-4.2- Exercise Psychology,  B.A.-PE-DSE-(4)-4.3- Exercise Prescription,  B.A.-PE-DSE-(4)-4.4- Relaxation andMeditation,  B.A.-PE-DSE-(4)-4.5- Doping and its Prevention,  B.A.-PE-DSE-(4)-4.6- Sports Anthology;  GE:  B.A.-PE-GE-(4)-4.1- Physical Education for Inclusiveness  B.A.-PE-GE-(4)-4.2- Physical Fitness Management				Dissertation on Major <b>OR</b> Dissertation on Minor <b>OR</b> Academic Project/ Entrepreneurship p (6)	22 Credits
Student on exit shall be awarded Bachelor of (in the field of Multidisciplinary study) (Honours or Honours with Academic Project/ Entrepreneurship) after securing the requisite 176 credits on completion of Semester VIII							Total=176

# Should not be repeated in SEC

## Should not be repeated in DSC

### Should not be repeated in DSC

Team Games: Basketball, Baseball, Cricket, Football, Handball, Hockey, Kabaddi, Kho-Kho, Netball, Softball, Volleyball

Individual Sports: Athletics, Archery, Badminton, Boxing, Chess, Gymnastics, Judo, Power-lifting, Shooting, Swimming, Table Tennis, Wrestling, Yoga

**NOTE: The candidates opting Physical Education as Minor, these subjects will be offered as DSC semester wise:**

Sem-1: History and Foundations of Physical Education

Sem-2: Anatomy and Physiology

Sem-3: Health Education

Sem-4: Athletic Care and Rehabilitation

Sem-5: Sports Psychology

Sem-6: Kinesiology

# SYLLABUS OF DISCIPLINE SPECIFIC CORE PAPERS (DSC)

## SEMESTER-1

### B.A.-PE-DSC-1-(4)-1.1- HISTORY AND FOUNDATIONS OF PHYSICAL EDUCATION

**M.M.: 100**

**No. of Credits: 04 (Theory)**

**Theory: 60 Hours**

**Learning Objective:** To provide the knowledge and applications of historical development of physical education and sports as well as to familiarize the students with the philosophical, biological, psychological and sociological foundations of physical education with application point of view.

**Learning Outcomes:**

1. The learners will be able to conceptualize different concepts related to physical education and sports so that they can learn, correlate, compare and apply the same in the field.
2. The learners will develop the factual knowledge of the various terminologies and information, so that they can correlate, compare and apply the same to different professionals of Physical Education.
3. The learners will be able to comprehend the subject matter as well as be enabled to correlate, compare and apply different concepts and components of the historical perspectives and recent developments in the field of physical education and sports.
4. The learners will be able to understand as well as compare, correlate the past and present of the multi-disciplinary foundations of physical education and sports for best applications for best outcome.
5. The learners will acquire the knowledge of history & foundations of Physical Education and understand the purpose & development of physical education & sports. The learner can compare/ correlate the same in relation to present context in practice.
6. The learners will 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. The learners can compare/correlate the same in relation to present context in practice.
7. The learners will learn biological, psychological and sociological foundation of Physical Education. The learners will learn to assess the body types by Heath & Carter method. The learners will 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. The learner can compare/ correlate the same with present context in practice.
8. The learners will gain knowledge of the modern and ancient historical development of Olympic movement and Olympic Games. The learners will also learn to prepare reports e.g. on NCTE approved institutions for D.P.Ed, B.P.Ed & M.P.Ed course of study. The learner will take best advantage of the above for best professional development and outcome.
9. The learners will gain knowledge of professional preparation in Physical Education-YMCA, LNIPE, IGIPESS, SAI, NSNIS, Programme – NSO, NCC, NSS and Sports Career Avenues, National Sports awards and Honours. Such learning will give stronger professional base and practices

**Unit-1: Introduction to Physical Education and Sports and General Awareness**

**(15 Hours)**

1. Meaning and Definition of Physical Education
2. Aim and Objectives of Physical Education
3. Physical Education as an Art and/or Science
4. Significance of Physical Education in the Modern Society
5. Meaning and Definition of Sports, Types of Sports–Individual, Team, Combative,

Recreational etc.

**Unit-2: Growth and Development of Physical Education and Sports (15 Hours)**

1. History of Physical Education and Sports in the World : Greece, Rome, Sweden, Germany and Denmark
2. Growth and Development of Physical Education in India(Pre and post-Independence)
3. Various Schemes for Promotion of Sports in India

**Unit-3: Major Competitions at National and International Level (15 Hours)**

1. Major Sports Competitions at International Level: Olympics Games (Summer, Winter and Paralympics), Asian Games, Commonwealth Games, SAF Games, World Cups, World Universities
2. Major Sports Competitions at National Level: National Games, Khelo India University Games (KIUG), Khelo India Youth Games (KIYG), Inter-University (All India & Zonal) Competitions, National Championships
3. Prominent Honours and Awards in Games and Sports in India, Different Cups and Trophies at National and International level in different Sports
4. Structure and functions of regulatory bodies of various games and sports at International level–International Olympic Committee (IOC), International Sports Federations (ISFs), International Cricket Council (ICC), World Anti-Doping Agency (WADA)

**Unit-4: Foundations of Physical Education (15 Hours)**

1. Philosophical Foundations of Physical Education: Idealism, Pragmatism, Naturalism, Realism
2. Biological Foundations of Physical Education: Growth and Development, Age and Gender Characteristics, Body Types, Anthropometric differences
3. Psychological Foundations of Physical Education: Learning types, Learning Curves, Laws of Learning, Attitude, Interest, Cognition, Emotions and Sentiments
4. Sociological Foundations of Physical Education: Society and Culture, Social Acceptance and Recognition, Leadership, Social Integration and Cohesiveness

**Suggested Readings:**

1. Graham, G. (2001), Teaching Children Physical Education: Becoming a Master Teacher. Human Kinetics, Champaign, Illinois, USA.
2. Kamlesh, M.L. & Singh, M. K. (2006), Physical Education (Naveen Publications).
3. Lau, S.K. (1999), Great Indian players, New Delhi, Sports Publications
4. Lumpkin, A. (2007), Introduction to Physical Education, Exercise Science and Sports Studies, McGraw Hill, New York, U.S.A.
5. Shaffer, D.R. (2002), Developmental Psychology: Childhood and Adolescence. Thomson, Sydney, Australia.
6. Sharma K. (2014), *Sharirik Shiksha Ka Itihas*, Friends Publications (India), New Delhi.
7. Siedentop, D. (2004), Introduction to Physical Education, Fitness and Sport, McGraw Hill Companies Inc., New York, USA.
8. Singh, A. et.al. (2000), Essentials of Physical Education, Kalyani Publishers, Ludhiana, Punjab.
9. Wuest, D.A. & C.A. Bucher (2006), Foundations of Physical Education, Exercise Science, and Sports. McGraw Hill Companies, Inc., New York, USA.

## SEMESTER-1

### **B.A.-PE-DSC-1-(4)-1.2-STRUCTURE AND FUNCTIONS OF SPORTS BODIES/ ORGANISATIONS**

**M.M.: 100**

**No. of Credits: 04 (Theory)**

**Total Theory: 60 hours**

**Learning Objective:** To familiarize the students with the major sports competitions, professional training institutions in India along with the structure and functions of various sports bodies/ organizations.

**Learning Outcomes:**

1. The learners will know about the existing sports competitions in India and the world, so that they can explore the best possibilities.
2. The learners will develop the factual knowledge and develop applications of professional preparation in the field of physical education and sports in India, so that they can explore the best possibilities.
3. The learners will be acquainted with the organizational structure and functions of various sports bodies for different applications, so that they can explore the best possibilities.
4. The learners will be able to develop an understanding of the functioning of various sports bodies/ organizations at national and international level and apply the same for different professional purposes, so that they can explore the best possibilities.

**Unit-1: Major Sports Competitions at International and National Level (15 Hours)**

1. Olympic Games (Summer, Winter and Paralympics)
2. Asian Games, Commonwealth Games, SAF Games,
3. World Cups, World Universities, World Championships
4. National Games, National Championships
5. Khelo India University Games (KIUG), Inter-University (All India & Zonal) Competitions
6. Major International and National League Tournaments

**Unit-2: Institutes for Professional Preparation of Physical Education and Sports in India (15 Hours)**

1. Young Men Christian Association (YMCA)
2. Lakshmi Bai National Institute of Physical Education (LNIPE)
3. Indira Gandhi Institute of Physical Education and Sports Sciences (IGIPSS)
4. Hanuman Vyayam Prasarak Madal, Amravati (HVPM)
5. Netaji Subhash National Institute of Sports (NSNIS)

**Unit-3: Structure and Functions of International Sports Bodies/ Organizations (15 Hours)**

1. International Olympic Committee (IOC)
2. International Paralympic Committee (IPC)
3. Olympic Council of Asia (OCA)
4. Commonwealth Games Federation (CGF)
5. South Asian Federation Games (SAFG)
6. International Sports Federations (ISFs)
7. International University Sports Federation (FISU)
8. World Anti-Doping Agency (WADA)

**Unit-4: Structure and Functions of National Sports Bodies/ Organizations (15 Hours)**

1. Indian Olympic Association (IOA)
2. Ministry of Youth Affairs and Sports (MYAS)
3. Sports Authority of India (SAI)
4. Association of Indian Universities (AIU)

5. National Sports Federations (NSFs)
6. National Anti-Doping Agency (NADA)

### **Part B- Practical:**

Visit to any institute of Physical Education/Sports / National Sports Federations in India

### **Suggested Readings:**

1. Graham, G. (2001), Teaching Children Physical Education: Becoming a Master Teacher. Human Kinetics, Champaign, Illinois, USA.
2. Kamlesh, M.L. & Singh, M. K. (2006), Physical Education (Naveen Publications).
3. Lau, S.K. (1999), Great Indian players, New Delhi, Sports Publications
4. Lumpkin, A. (2007), Introduction to Physical Education, Exercise Science and Sports Studies, McGraw Hill, New York, U.S.A.
5. Shaffer, D.R. (2002), Developmental Psychology: Childhood and Adolescence. Thomson, Sydney, Australia.
6. Sharma K. (2014), *Sharirik Shiksha Ka Itihas*, Friends Publications (India), New Delhi.
7. Siedentop, D. (2004), Introduction to Physical Education, Fitness and Sport, McGraw Hill Companies Inc., New York, USA.
8. Singh, A. et.al. (2000), Essentials of Physical Education, Kalyani Publishers, Ludhiana, Punjab.
9. Wuest, D.A. & C.A. Bucher (2006), Foundations of Physical Education, Exercise Science, and Sports. McGraw Hill Companies, Inc., New York, USA.

### **Websites of concerned organizations:**

1. <https://olympics.com>
2. <https://ocasia.org>
3. <https://www.fisu.net>
4. <https://thecgf.com>
5. <https://uia.org>
6. <https://www.fisu.net>
7. <https://www.wada-ama.org>
8. <https://olympic.ind.in>
9. <https://yas.nic.in>
10. <https://sportsauthorityofindia.nic.in>
11. <https://evaluation.aiu.ac.in>
12. <https://www.nadaindia.org>
13. <https://schooltimesindia.com>
14. <https://sportsCouncil.in>

## SEMESTER-II

### B.A.-PE-DSC-2- (4)-2.1-ANATOMY AND PHYSIOLOGY

**M.M.: 100**

**No. of Credits: 04 (Theory)**

**Theory: 60 Hours**

**Learning Objective:** To provide learners with the basic knowledge and practices of anatomical structures and functions of the human body.

#### **Learning Outcomes:**

1. The learner will acquire the basic knowledge of anatomy and physiology of the human body. They will develop understanding about the functions of each system and organs of the body. Such core knowledge and skill will help to create a strong foundation to engage human subject of all ages, sex, ability in different games/ sports/ fitness programs.
2. The learner will develop the understanding and knowledge of 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. The learner will also learn to count the pulse rate. The learner will be able to compare (individual differences), correlate (different systems/games for physical education) to analyze performance.
3. The learners will develop the understanding and knowledge of muscular system -classification, s 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& function of blood, athlete's heart, respiratory system-structure and function, second wind, oxygen debt. The learners will be able to learn the measurement of blood pressure and study of various bones of human body. The learner will also be able to compare (individual differences), correlate (different systems/ games as per syllabus for physical education) to analyze performance.
4. The learner will be able to explain different body system (as per syllabus) with the help of models and various movements of the joints. The learner will also be able to compare (individual differences), correlate (different systems/ games for physical education) to analyze performance.

#### **Unit-1: Introduction to Anatomy and Physiology**

**(20 Hours)**

1. Meaning and Definition of Anatomy, Physiology and Exercise Physiology
2. Importance of Anatomy and Physiology in Physical Education and Sports
3. Description of Cell and Tissues

#### **Unit-2: Introduction to Various Systems-I**

**(20 Hours)**

1. Skeletal System: Structural and Functional Classification of Bones, Types of Joints, Different types of Movement around the Joints, Effects of Exercise on Skeletal System
2. Muscular System: Structural and Functional Classification of Muscles, Properties of Muscles, Types of Muscular Contraction, Effects of Exercise on Muscular System, Metabolism

#### **Unit-3: Introduction to Various Systems-II**

**(20 Hours)**

1. Circulatory System: Structure and Function of Human Heart, Circulation of Blood, Functions of Blood, Effects of Exercise on Circulatory System, Blood Pressure, Cardiac Output
2. Respiratory System: Structure and Function of Respiratory System, Effects of Exercise on Respiratory System, Second Wind, Oxygen Debt

#### **Suggested Readings:**

1. Jain, A.K.(2002), Anatomy & Physiology for Nurses. Arya Publishers, Delhi.

2. Mordred, E.N.(2007), Essentials of Human Anatomy & Physiology. Ed.8<sup>th</sup> Dorling Kindersley, India.
3. Prives, M. and others (2004), Human Anatomy Vol. I & II Paragon, Delhi.
4. Seeley & others (2008), Anatomy & Physiology. McGraw Hill, Boston.
5. Tortora (2003), Principles of Anatomy & Physiology, New York: John Willy & Sons.
6. William, C.S. (2000), Essentials of Human Anatomy & Physiology, Benjamin.
7. Wilson and Waugh (1996), Anatomy & Physiology in Health & Illness. Churchill Livingstone.

## SEMESTER-II

### B.A.-PE-DSC-2- (4)-2.2-EXERCISE PHYSIOLOGY

**M.M.: 100**

**No. of Credits: 04 (Theory)**

**Total Theory: 60 Hours**

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

#### **Learning Outcomes:**

1. The learners will be able to understand the physiological basis of physical activities and functioning. The learners will attain knowledge, understanding, ability of interpreting the concepts and practices in exercise physiology.
2. The learners will learn the changes/adaptations in body systems in response to exercise & training. Such core knowledge and skill will help to create a strong foundation to engage human subject of all ages, sex for exercise, health, fitness, sports performance. The learner will be able to correlate, compare and analyze the cause (exercise) and effect (physiological changes) for best practices.
3. The learners will be able to understand the concept of exercise physiology and its significance in the field of Physical Education & Sports, acute physiological response, and chronic physiological adaptation. The learner will be well acquainted with the practical aspect of assessing resting heart rate and blood pressure of the subject. The learners will also be able to correlate, compare and analyze the cause (exercise) and effect (physiological changes) for best practices in regard to above.
4. The learners will develop the understanding and knowledge and practices of hormonal regulation in exercise & training: The endocrine glands and their hormones, acute response and chronic adaptation. The learners will be able to measure vital capacity using Spirometer and assess the Body Mass Index of the subjects including digestive system, temperature regulation, nervous system, sensory system, excretory system and reproductive system. The learners will also be able to correlate, compare and analyze the cause (exercise) and effect (physiological changes) for best practices in regard to above.
5. The learners will gain knowledge of cardiovascular function during exercise and training: structure & function of the heart, acute response and chronic adaptation, respiratory function during exercise and training: respiratory parameters, second wind, acute response and chronic adaptation. The learners will be also able to correlate, compare and analyze the cause (exercise) and effect (physiological changes) for best practices in regard to above.

#### **Unit-1: Introduction to Physiology**

**(15 Hours)**

1. Meaning and Definition of Physiology and Exercise Physiology
2. Minute Structure and Functions of Cell and its Organelles
3. Structure and Classifications of Tissues
4. Essential Properties of Living Organisms
5. Physiological Concept of Health and Fitness

#### **Unit-2: Cardio-Pulmonary System**

**(15 Hours)**

1. Cardio-vascular System and Blood: Cardiac Cycle, Pumping action of Heart and its Regulation; Blood Pressure, Its Maintenance and Regulation; Cardiac Output and its Regulation; Functions of Blood and Blood Clotting; Effect of Exercise on Circulatory System
2. Respiratory System: Mechanism of Respiration; Pulmonary Ventilation and its Regulation; Second-wind and Oxygen Debt; Effect of Exercise on Respiratory System

#### **Unit-3: Digestive, Nervous and Sensory Systems**

**(15 Hours)**

1. Digestive System: Secretion and Function of the Digestive Juices; Functions of Liver; Absorption of Food; General Metabolism, Metabolism of Carbohydrates, Fats and Proteins; Temperature Regulation; Effect of Exercise on Digestive System

2. Nervous System: Functions of the important parts of the Nervous System, Cerebrum, Medulla Oblongata, Thalamus, Cerebellum and Spinal Cord; Functions of the Autonomic Nervous System; Basic Physiological Mechanism governing Posture and Equilibrium; Effect of Exercise on Nervous System
3. Sensory System: General Sensations (Cutaneous and Kinesthetic); Various forms of Senses with special reference to Vision and Hearing

**Unit-4: Excretory, Endocrine and Reproductive Systems (15 Hours)**

1. Excretory System: Excretion of Water from the Body through Skin (Sweating), Lungs, Kidney and GI Tract; Effect of Exercise on Excretory System
2. Endocrine System: Secretion of Endocrine Glands (Pituitary, Thyroid, Adrenal & Pancreas); Role of their secretion in Growth, Development and Body Functions; Effect of Exercise on Endocrine System
3. Reproductive System: Physiology of Human Reproduction, Basic Knowledge of Transmission of Hereditary Characteristics

**Suggested Readings:**

1. Jain, A.K. (2002), Anatomy & Physiology for Nurses. Arya Publishers, Delhi.
2. Koley, Shyamal (2007), Exercise Physiology – A Basic Approach. New Delhi: Friends Publications.
3. Kumari, Sheela, S.; Rana, Amita; and Kaushik, Seema (2008), Fitness, Aerobics and Gym Operations. New Delhi: Khel Sahitya Kendra.
4. Moried, E.N.(2007), Essentials of Human Anatomy & Physiology. Ed.8<sup>th</sup> Dorling Kindersley, India.
5. Prives, M. and others (2004), Human Anatomy Vol. I & II Paragon, Delhi.
6. Seeley & others (2008), Anatomy & Physiology. McGraw Hill, Boston.
7. Tortora (2003), Principles of Anatomy & Physiology, New York: John Willy & Sons.
8. William, C.S. (2000), Essentials of Human Anatomy & Physiology, Benjamin.
9. Wilson and Waugh (1996), Anatomy & Physiology in Health & Illness. Churchill Livingstone.

# Semester-1

## B.A.-PE-GE-(4)-1.1-SPORTS FOR LEISURE AND RECREATION

**MM: 100**

**Credit: 4 - (3 Theory, 1 Practical)**

**Theory: 45 Hours**

**Practical: 30 Hours**

**Learning Objective:** To develop the knowledge and its applications in sports for leisure and recreation in regard to its foundation, sports and recreation management as well as programme development with field experiences.

**Learning Outcomes:**

1. To develop the knowledge and its applications in Sports for leisure and recreation in regard to its functions, Sports and Recreation management as well as programme development with field experiences
2. The acquired knowledge of foundation of Sports for Leisure and Recreation will enable the learners to compare and correlate different concepts of leisure, sports and recreation.
3. The learners will be able to perform the communication and public relation in sports activities in regard to its different aspects by using different means.
4. The learners will be enabled to develop programme and field experiences with the use of knowledge in field (experiences) to facilitate the development on selected aspects.
5. The learners can perform recreation activities and correlate the experiences for different groups of people.

**Part-A Theory (45 Hours)**

**Unit I – Foundation (15 Hours)**

1. Definition and concept of Leisure, sports and recreation
2. Importance of Leisure, sports and recreation in community or society
3. Relationship between recreation and personal well being

**Unit II – Sports and Recreation Management (15 Hours)**

1. Communication and Public Relations in Sports - Working with volunteers and other human resources etc.
2. Risk management and insurance applied to sports and recreation organizations
3. Types of recreational activities (public/commercial/corporate/therapeutic activity /outdoor programmers, Intramural activities, Club sports, Leadership programmers

**Unit III – Programme Development and Field Experience (15 Hours)**

1. Sustainability and eco-recreation
2. Issues or problems related to leisure, sports and recreation activities for individual and society

**Part-B: Practical (30 Hours)**

1. Recreation for different groups of people
2. Gender specific recreation
3. Excursion Tour

## Semester-II

### B.A.-PE-GE-(4)-2.1-INCLUSIVE PHYSICAL EDUCATION

**MM: 100**

**Credit: 4 (3 Theory, 1 Practical)**

**Theory: 45 Hours**

**Practical: 30 Hours**

**Learning Objective:** To develop the knowledge and its applications in inclusive physical education in regard to its foundation, role management as well as programme development with field experiences.

**Learning Outcomes:**

1. To develop the factual knowledge and its applications in Inclusive Physical Education with regard to its functions, role management as well as programme development with field experiences and its application to different sections of society.
2. The knowledge attained about foundation of inclusive physical education will help the learners to understand the needs of different target groups by comprehending, comparing and correlating the work of different agencies involved in providing support to disability sport group.
3. The learners will be enabled to develop programme and field experiences with the use of knowledge in field experiences to facilitate the development on selected aspects.
4. The learners can perform recreation activities and correlate the experiences for different groups of people.

**Part –A Theory (45 hours)**

**Unit-1 Meaning & scope of Inclusive Physical Education (15 hours)**

1. Need & Importance of Inclusive Physical Education
2. Role of Educational Institution in developing Inclusiveness
3. Agencies supporting and promoting Inclusive Physical Education for disability sport

**Unit-2 Understanding challenges & special needs for the people with Disability face in daily life**

1. Implementing programme for people with disability
2. Supervision of carefully designed physical education program for people with disability

**Unit - 3 Instructional programme for a learner with a disability, based on a comprehensive assessment (15 hours)**

1. Learning the Sports skills
2. Physical Fitness
3. Volunteerism

**Part B- Practical: (30 hours)**

1. Organize inclusive sports event in your college
2. Volunteer for sports events for people with disability
3. Write briefly about the any two teaching aids used in Inclusive Physical education