

**Curriculum and Credit Framework as per
NEP 2020**

**For
Physical Education
in
B.A Multidisciplinary
Opt 3 Disciplinary Courses**

3rd Semester

(To be effective from the Academic Session 2024-25)



**Department of Law & Humanities
Gurugram University, Gurugram**

(A State Govt. University Established Under Haryana Act 17 Of 2017)

Pardeep Kumar

Benu Gupta

BA 3rd Sem
Exercise Physiology

Scheme UG A1: Undergraduate Programmes (Multidisciplinary)

| Course Code | Course Title | Course ID | L T P | | | L T P | | | Credits | MARKS | | | | |
|-----------------------|-------------------------|-----------|-------|--|---|---------|--|---|---------|-------|----|----|----|-------|
| | | | (Hrs) | | | Credits | | | | TI | TE | PI | PE | Total |
| Core Course(s) | | | | | | | | | | | | | | |
| CC-A3 | Exercise and Physiology | | 2 | | 4 | 2 | | 2 | 4 | 15 | 35 | 15 | 35 | 100 |

Learning Objectives:

Upon successful completion of this course, students will be able to:

- Identify and describe the basic structure and function of the major physiological systems relevant to exercise.
- Explain the acute physiological responses of these systems to different types of exercise.
- Describe the chronic adaptations of these systems to regular physical activity.
- Understand the basic physiological principles underlying exercise and training considerations.

For Paper Setter: Set eight questions in all. Question one is small answer type questions from all units. Each question of Seven marks.

For Students: Attempt any Five questions. Question One is compulsory. All questions carry equal marks.

Unit 1: Foundations of Exercise Physiology:

- 1.1 Introduction to Exercise Physiology: - Definition, scope, and historical perspective, Basic terminology used in Exercise Physiology, Relationship between exercise, physical activity, and health.
- 1.2 Basic Anatomy and Physiology: - Overview of skeletal, muscular, cardiovascular, respiratory, nervous system, Basic structure and function of cell & Tissue.
- 1.3 Skeletal Muscle Structure and Function: - Types of muscle tissue and muscle fibre, Detailed structure of skeletal muscle and the sliding filament theory.

Unit 2: Body Composition and Exercise:

- 2.1 Components of Body Composition.
- 2.2 Measurements of Body Composition.
- 2.3 Obesity Management.
- 2.4 Impact of Exercise on Body Composition.

Unit 3: Physiological Responses to Exercise:

- 3.1 Cardiovascular Responses: - Changes in heart rate, stroke volume, cardiac output, and blood pressure, Redistribution of blood flow.
- 3.2 Respiratory Responses: - Changes in ventilation, tidal volume, breathing frequency and Gas exchange.
- 3.3 Energy Metabolism During Exercise: - Energy sources (ATP, creatine phosphate, carbohydrates, fats, proteins), Anaerobic and aerobic metabolism, Muscle fatigue and recovery.

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Unit 4: Physiological Adaptations of Exercise:

- 4.1 Muscular Adaptations to Training: - Hypertrophy, Lowered resting heart rate and blood pressure.
- 4.2 Respiratory Adaptations to Training: - Adaptations in respiratory muscle function, Efficiency of ventilation.
- 4.3 Endocrine Adaptations to Training: - Changes in hormonal responses at rest and during exercise.

Practical Work:

- Calculation of BMI, Body Fat%, BP, Pulse Rate.
- Practice different type of Exercise.
- Cooper run/walk test.

Suggestive Readings:

1. Powers, S.K. & Howley, E.T. (2023), Exercise Physiology: Theory and Application to Fitness and Performance (11th ed.). New York: McGraw-Hill Education.
2. Kenney, W.L., Wilmore, J.H. & Costill, D.L. (2023), Physiology of Sport and Exercise (8th ed.). Champaign, IL: Human Kinetics.
3. McArdle, W.D., Katch, F.I. & Katch, V.L. (2022), Exercise Physiology: Nutrition, Energy, and Human Performance (9th ed.). Philadelphia: Wolters Kluwer Health.
4. McArdle, W.D., Katch, F.I. & Katch, V.L. (2015), Essentials of Exercise Physiology (5th ed.). Philadelphia: Lippincott Williams & Wilkins.
5. Ehrman, J.K., Gordon, P.M., Visich, P.S. & Keteyian, S.J. (2018). Clinical Exercise Physiology (4th ed.) Champaign, IL: Human Kinetics.
6. Ehrman, J.K. (2009), Advanced Exercise Physiology: Essential Concepts and Applications. Champaign, IL: Human Kinetics.
7. Boone, T. (2014), Introduction to Exercise Physiology (4th ed.). Sudbury, MA: Jones & Bartlett Learning.
8. Tipton, C.M. (2006), Applied Physiology of Exercise. Champaign, IL: Human Kinetics.
9. Kansal, D.K. (2008), A Textbook of Applied Physiology. New Delhi: Sports & Spiritual Science Publications.
10. Kamlesh, M.L. (2006), Applied Exercise Physiology. New Delhi: Khel Sahitya Kendra.

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BA 3rd Sem
Nutrition in Physical Education & Sports

**Multidisciplinary Course from the department for pool of the Courses
in the University**

(These courses are to be offered to students of different discipline/Subject)

| Course Code | Course Title | Course ID | L | T | P | L | T | P | Credits | MARKS | | | | |
|-------------|---------------------------------|-----------|-------|---|---|---------|---|---|---------|-------|----|----|----|-------|
| | | | (Hrs) | | | Credits | | | | TI | TE | PI | PE | Total |
| MDC-3 | Nutrition in Phy. Edu. & Sports | | 2 | | 2 | 2 | | 1 | 3 | 15 | 35 | 5 | 20 | 75 |

Learning Objectives:

Upon successful completion of this course, students will be able to:

- Understand the basic functions of essential nutrients in the body.
- Explain the energy systems and the role of macronutrients in fuelling physical activity.
- Identify the micronutrient needs of athletes and physically active individuals.
- Understand the importance of hydration for performance and health.
- Apply nutritional strategies for different types of sports and training.
- Evaluate the impact of nutrition on recovery and injury prevention.
- Understand the principles of weight management for athletes.

For Paper Setter: Set eight questions in all. Question one is small answer type questions from all units. Each question of Seven marks.

For Students: Attempt any Five questions. Question One is compulsory. All questions carry equal marks.

Unit 1: Fundamentals of Nutrition:

- 1.1 Introduction and importance to Nutrition for Physical Activity & Sports: - Defining the field and its importance for performance and health in sports.
- 1.2 Macronutrients: Carbohydrates: - Studying the different types of carbohydrates and their role as the primary fuel source for exercise.
- 1.3 Fats: - Exploring the various types of fats and their functions in energy provision, hormone production, and overall health for athletes.
- 1.4 Proteins: - Understanding the structure and function of proteins, their role in muscle repair, growth, and other physiological processes relevant to athletes.

Unit 2: Micronutrients, Hydration, and Energy Balance:

- 2.1 Vitamins and Minerals: - Learning about essential vitamins and minerals and their specific roles in supporting metabolic processes and overall health in physically active individuals.
- 2.2 Hydration for Optimal Performance: - Understanding the importance of fluid balance, the effects of dehydration, and strategies for proper hydration before, during, and after exercise.
- 2.3 Energy Balance and Body Composition: - Exploring the relationship between energy intake and expenditure, and the

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impact of nutrition on achieving and maintaining optimal body composition for sports.

- 2.4 Nutritional Assessment and Dietary Guidelines: - Learning basic methods of assessing dietary intake and understanding general nutritional recommendations for athletes and active individuals.

Unit 3: Sport Nutrition:

- 1.1 Fuelling Endurance Sports: - Examining nutritional strategies to optimize performance in endurance activities, including carbohydrate loading and fuelling during events.
- 1.2 Nutrition for Strength and Power Sports: - Understanding the dietary needs to support muscle growth, strength development, and recovery in resistance-based activities.
- 1.3 Nutrition for Team Sports and High-Intensity Activities: - Exploring nutritional considerations for sports with intermittent high-intensity efforts and the need for sustained energy and quick recovery.
- 1.4 Pre-Competition Meals and Recovery Nutrition: - Learning about optimal food and fluid intake before competition and strategies to replenish energy stores and facilitate muscle repair post-exercise.

Practical Work:

- Diet Chart: Create Balance Diet Chart for Sports person.
- Nutrition: Assessing Pre/During/Post game nutrition demands.

Suggestive Readings:

1. Williams, M.H., Rawson, E.S. & Branch, J.D. (2019), Nutrition for Health, Fitness & Sport (11th ed.). New York: McGraw-Hill Education.
2. Dunford, M. & Doyle, J.A. (2022), Nutrition for Sport and Exercise (4th ed.). Boston: Cengage Learning.
3. Manore, M.M., Thompson, J.L. & Valliant, M.W. (2017), Sport Nutrition for Health and Performance (3rd ed.). Champaign, IL: Human Kinetics.
4. Bean, A. (2022), The Complete Guide to Sports Nutrition (10th ed.). London: Bloomsbury Publishing.
5. Kansal, D.K. (2012), A Textbook of Applied Nutrition and Dietetics in Sports. New Delhi: Sports & Spiritual Science Publications.
6. Puri, K. & Goyal, R. (2016), Health and Sports Nutrition. New Delhi: Khel Sahitya Kendra.
7. Sharma, V.M. (2010), Nutrition in Exercise and Sport. New Delhi: Sports Publication.
8. Verma, S.K. (2014), Sports Nutrition and Health Education. New Delhi: Friends Publications.
9. Burke, L. & Deakin, V. (2020), Clinical Sports Nutrition (6th ed.). Sydney: McGraw-Hill Education Australia.

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BA 3rd Sem Sports Sociology

Minor Course from the department for pool of the Courses in the University

(These courses are offered by each department for students of other departments/same department to gain a broader understanding beyond the major discipline)

| Course Code | Course Title | Course ID | L | T | P | L | T | P | Credits | MARKS | | | | |
|-------------|------------------|-----------|-------|---|---|---------|---|---|---------|-------|----|----|----|-------|
| | | | (Hrs) | | | Credits | | | | TI | TE | PI | PE | Total |
| MIC-3 | Sports Sociology | | 2 | | 4 | 2 | | 2 | 4 | 15 | 35 | 15 | 35 | 100 |

Learning Objectives:

Upon successful completion of this course, students will be able to:

- Understand key sociological theories and concepts and apply them to the study of sport.
- Analyse the social structures and institutions that shape sport.
- Critically examine the intersections of sport with social class, gender, and race/ethnicity.
- Understand the social construction of deviance in sport.
- Analyse the role of media in shaping perceptions and experiences of sport.
- Explore the relationship between sport and education.
- Understand the globalization of sport and its social implications.
- Critically evaluate the potential of sport for social change.

For Paper Setter: Set eight questions in all. Question one is small answer type questions from all units. Each question of Seven marks.

For Students: Attempt any Five questions. Question One is compulsory. All questions carry equal marks.

Unit 1: Foundations of Sports Sociology:

- 1.1 Introduction to Sports Sociology: - Scope, Significance and field of sports sociology, its relevance in understanding society, and key sociological perspectives.
- 1.2 Sociological Theories and Sport: - Applying major sociological theories – functionalism, conflict theory, symbolic interactionism, critical theory – to analyse sport and social phenomena within it.
- 1.3 Culture, Values, and Sport: - Examining how cultural norms, values, and ideologies are reflected and transmitted through sport.
- 1.4 Socialization into and Through Sport: - Understanding how individuals learn to participate in sport and how sport influences the development of identities and social skills.

Unit 2: Social Equality through Sport:

- 2.1 Socioeconomic status and Sport: - Concept and significance, its impact on accessibility and participation in sports.
- 2.2 Gender and Sport: - Examining the historical and contemporary experiences of women and men in sport, issues of gender equity, and the social construction of masculinity and femininity in sporting contexts.
- 2.3 Ethnicity, Race and Sport: - Investigating the role of race and ethnicity in shaping sporting opportunities, experiences of

discrimination, and the representation of racial and ethnic minorities in sport.

- 2.4 Disability and Sport: - Exploring the social barriers and opportunities for individuals with disabilities in sport.

Unit 3: Sport and Social concerns:

- 3.1 Deviance and Violence in Sport: - Analysing the social construction of deviance in sport, the causes and consequences of violence among athletes and spectators, and efforts to control it.
- 3.2 The Media and Sport: - Examining the powerful influence of various media (television, internet, social media) on the presentation, consumption, and cultural significance of sport.
- 3.3 Sport and Education: - Investigating the relationship between educational institutions and sport, including issues related to student-athletes, funding, and the role of sport in school culture.
- 3.4 Sport and the Economy: - Analysing the economic aspects of sport, including professional leagues, sponsorships, the sports industry, and the impact of commercialization.

Unit 4: Globalization and Future Perspectives of Sport:

- 4.1 The Globalization of Sport: - Exploring the transnational flow of athletes, sporting events, and cultural influences, and the social and political implications of global sport.
- 4.2 Sport and Social Change: - Critically examining the potential of sport to promote social justice, challenge inequalities, and contribute to positive social change movements.
- 4.3 Sports, E-Sports and socialization.
- 4.4 Future of sports and society through different sports events.

Practical Work:

- Case Study: social contribution of any sportsperson of your choice.
- Group Presentation: Project presentation on burning topic of sports sociology.

Suggestive Readings:

1. Powers, S.K. & Howley, E.T. (2023), Exercise Physiology: Theory and Application to Fitness and Performance (11th ed.). New York: McGraw-Hill Education.
2. Kenney, W.L., Wilmore, J.H. & Costill, D.L. (2023). Physiology of Sport and Exercise (8th ed.). Champaign, IL: Human Kinetics.
3. McArdle, W.D., Katch, F.I. & Katch, V.L. (2022), Exercise Physiology: Nutrition, Energy, and Human Performance (9th ed.). Philadelphia: Wolters Kluwer Health.
4. McArdle, W.D., Katch, F.I. & Katch, V.L. (2015). Essentials of Exercise Physiology (5th ed.). Philadelphia: Lippincott Williams & Wilkins.
5. Ehrman, J.K., Gordon, P.M., Visich, P.S. & Keteyian, S.J. (2018). Clinical Exercise Physiology (4th ed.). Champaign, IL: Human Kinetics.
6. Ehrman, J.K. (2009), Advanced Exercise Physiology: Essential Concepts and Applications. Champaign, IL: Human Kinetics.
7. Tipton, C.M. (2006), Applied Physiology of Exercise. Champaign, IL: Human Kinetics.
8. Kansal, D.K. (2008), A Textbook of Applied Physiology. New Delhi: Sports & Spiritual Science Publications.
9. Kamlesh, M.L. (2006), Applied Exercise Physiology. New Delhi: Khel Sahitya Kendra.

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**Curriculum and Credit Framework as per
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**For
Physical Education
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Opt 3 Disciplinary Courses**

4th Semester

(To be effective from the Academic Session 2024-25)



**Department of Law & Humanities
Gurugram University, Gurugram**

(A State Govt. University Established Under Haryana Act 17 Of 2017)

Pardeep Kumar

Beni Gupta

240/PE/CC401

BA 4th Sem**Biomechanics & Kinesiology in Physical Education**

Scheme UG A1: Undergraduate Programmes (Multidisciplinary)

| Course Code | Course Title | Course ID | L | T | P | L | T | P | Credits | MARKS | | | | |
|----------------|--|-----------|-------|---|---|---------|---|---|---------|-------|----|----|----|-------|
| | | | (Hrs) | | | Credits | | | | TI | TE | PI | PE | Total |
| Core Course(s) | | | | | | | | | | | | | | |
| CC-A4 | Biomechanics & Kinesiology in Physical Education | | 2 | | 4 | 2 | | 2 | 4 | 15 | 35 | 15 | 35 | 100 |

Learning Objectives:

- Upon successful completion of this course, students will be able to:
- Understand the basic anatomical structures and their roles in human movement.
- Describe fundamental biomechanical principles related to motion, forces, and energy.
- Analyze human movement qualitatively and quantitatively.
- Identify and explain the biomechanical factors influencing various physical activities and sports skills.
- Apply biomechanical and kinesiological principles to enhance movement efficiency and reduce injury risk.
- Understand the concepts of stability, balance, and leverage in human movement.
- Analyze common movement patterns and identify potential biomechanical limitations.

For Paper Setter: Set eight questions in all. Question one is small answer type questions from all units. Each question of Seven marks.

For Students: Attempt any Five questions. Question One is compulsory. All questions carry equal marks.

Unit 1: Foundations of Anatomy, Physiology, and Biomechanics

- 1.1 Introduction to Kinesiology and Biomechanics
- 1.2 Basic Anatomical Terminology and Joint Structure
- 1.3 Skeletal System and Muscular System Overview
- 1.4 Forces and Newton's Laws of Motion

Unit 2: Kinetic Structure of Human Movement:

- 2.1 Fundamental Mechanical Principles: Linear and Angular Motion
- 2.2 Kinetics of Linear Motion: Impulse and Momentum
- 2.3 Kinetics of Angular Motion: Torque and Rotational Inertia
- 2.4 Work, Power, and Energy in Human Movement

Unit 3: Biomechanical Analysis of Human Movement:

- 3.1 Linear Kinematic Analysis: Displacement, Velocity, and Acceleration
- 3.2 Angular Kinematic Analysis: Angular Displacement, Velocity, and Acceleration
- 3.3 Projectile Motion
- 3.4 Fluid Mechanics in Sport: Drag and Lift, Magnus Effect

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Unit 4: Applications in Physical Education and Sport:

- 4.1 Biomechanics of Fundamental Motor Skills: Walking, Running, Jumping, lifting, Throwing
- 4.2 Mechanical and Physiological principles of human movement
- 4.3 Injury Mechanisms and Prevention through Biomechanics
- 4.4 Biomechanical Foundation of Rehabilitation

Practical Work:

- Joint Action, Axis & Plane of various moments
- Understanding and location of Various Muscles of Shoulder, Elbow, Hip, Knee, Ankle & Wrist Joints
- Measuring the Centre of Gravity & Balance through selected tests (conduct test on five members)

Suggestive Readings:

1. Hall, S.J. (2022), Basic Biomechanics (9th ed.). New York: McGraw-Hill Education.
2. Hamill, J., Knutzen, K.M. & Derrick, T. (2021). Biomechanical Basis of Human Movement (5th ed.). Philadelphia: Wolters Kluwer.
3. McGinnis, P.M. (2020), Biomechanics of Sport and Exercise (3rd ed.). Champaign, IL: Human Kinetics.
4. Rasch, P.J. & Burke, R.K. (2013), Kinesiology and Applied Anatomy (10th ed.). Philadelphia: Lippincott Williams & Wilkins.
5. Enoka, R.M. (2015), Neuromechanics of Human Movement (5th ed.). Champaign, IL: Human Kinetics.
6. Kansal, D.K. (2010), A Textbook of Biomechanics and Kinesiology. New Delhi: Sports and Spiritual Science Publications.
7. Verma, J.P. (2014), Kinesiology and Biomechanics. New Delhi: Sports Publication.
8. Uppal, A.K. (2005), Kinesiology in Physical Education and Exercise Science. New Delhi: Friends Publications.
9. Raj Shree (2012), Applied Kinesiology and Biomechanics. New Delhi: Khel Sahitya Kendra.
10. Singh, Ajmer et al. (2011), Essentials of Physical Education. (Includes biomechanics and kinesiology section) New Delhi: Kalyani Publishers.
11. Nordin, M. & Frankel, V.H. (2012), Basic Biomechanics of the Musculoskeletal System (4th ed.). Philadelphia: Lippincott Williams & Wilkins.
12. Thompson, C.W. (2009), Manual of Structural Kinesiology (17th ed.). Boston: McGraw-Hill.

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240/PE/MI401

BA 4th Sem Event Management in Sports

Minor Course from the department for pool of the Courses in the University
(These courses are offered by each department for students of other departments/same department to gain a broader understanding beyond the major discipline)

| Course Code | Course Title | Course ID | L | T | P | L | T | P | Credits | MARKS | | | | |
|-------------|----------------------------|-----------|-------|---|---|---------|---|---|---------|-------|----|----|----|-------|
| | | | (Hrs) | | | Credits | | | | TI | TE | PI | PE | Total |
| MIC-6 | Event Management in Sports | | 2 | | 4 | 2 | | 2 | 4 | 15 | 35 | 15 | 35 | 100 |

Learning Objectives:

- Upon successful completion of this course, students will be able to:
- Understand the key stages of the sports event management process.
- Identify and analyze the various stakeholders involved in sports events.
- Develop effective marketing and communication strategies for sports events.
- Understand the financial aspects of sports event budgeting and revenue generation.
- Plan and manage the operational elements of sports events, including logistics and venue management.
- Identify and mitigate potential risks associated with sports events.
- Understand the legal and ethical considerations in sports event management.
- Evaluate the success and impact of sports events.

For Paper Setter: Set eight questions in all. Question one is small answer type questions from all units. Each question of Seven marks.

For Students: Attempt any Five questions. Question One is compulsory. All questions carry equal marks.

Unit 1: Foundations of Sports Event Management:

- 1.1 Introduction to Sports Event Management: Scope and Significance
- 1.2 The Event Management Process: Planning, Organization, Implementation, and Evaluation
- 1.3 Functional Areas of Organizing Committee
- 1.4 Basic understanding of Legal and Ethical Considerations in Sports Events

Unit 2: Marketing and Financial Aspects of Sports Event:

- 2.1 Budgeting and Financial Management for Sports Events
- 2.2 Sports Event Marketing and Sponsorship
- 2.3 Revenue Generation: Ticketing, Telecast rights etc.
- 2.4 Economic Impact of Sports Event

Unit 3: Operational Planning and Execution:

- 3.1 Principles of Venue and Site Management
- 3.2 Basic understanding of Logistics and Operations for organizing Sports Event
- 3.3 Volunteer and Work-force Management in Sports Event

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3.4 Importance of Technology and Innovation in Sports Event Management

Unit 4: Risk Management and Event Evaluation:

- 4.1 Risk Assessment in Sports Events
- 4.2 Principles of Risk Management in Sports Events
- 4.3 Sustainable Legacy: concept of sustainable legacy in sports event management (e.g. Ecosystem, Environment and Sociopolitical impact)
- 4.4 Event Evaluation: Methods for evaluating the success and impact of sports events based on various criteria (e.g., economic, social, environmental)

Practical Work:

- Organising A Sports Event
- Drawing Fixture: Prepare a fixture for even and odd number of teams
- Preparing a Sports Budget for Annual Athletic Meet

Suggestive Readings:

1. Masterman, G. (2021), Strategic Sports Event Management (4th ed.). London: Routledge.
2. Westerbeek, H., Smith, A., Turner, P., Emery, P., Green, C. & van Leeuwen, L. (2005). Managing Sport Facilities and Major Events. London: Routledge.
3. Parent, M.M. & Smith-Swan, S. (2013), Managing Major Sports Events: Theory and Practice. London: Routledge.
4. Shone, A. & Parry, B. (2010), Successful Event Management: A Practical Handbook (3rd ed.). Hampshire: Cengage Learning EMEA.
5. Bhattacharya, A.K. (2015), Sports Management and Event Organization. New Delhi: Sports Publication.
6. Kansal, D.K. (2011), Textbook of Sports Management. New Delhi: Sports and Spiritual Science Publications.
7. Singh, Ajmer et al. (2013), Essentials of Physical Education. (Includes a unit on event management) New Delhi: Kalyani Publishers.
8. Puri, K. & Goyal, R. (2014), Management and Organization of Sports Events. New Delhi: Khel Sahitya Kendra.
9. Ferdinand, N. & Kitchin, P. (2017), Events Management: An International Approach (2nd ed.). London: SAGE Publications.
10. Mallen, C. & Adams, L. (2017), Event Management in Sport, Recreation and Tourism: Theoretical and Practical Dimensions (3rd ed.). New York: Routledge.

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240/PE/10401

BA 4th Sem Athletic Care and First Aid

Vocational Course from the department for pool of the Courses in the
University

(These courses are offered by each department for students of other departments/same
department and is focused on practical work, preparing students for a particular skilled
profession)

| Course Code | Course Title | Course ID | L | T | P | L | T | P | Credits | MARKS | | | | |
|-------------|-----------------------------|-----------|-------|---|---|---------|---|---|---------|-------|----|----|----|-------|
| | | | (Hrs) | | | Credits | | | | TI | TE | PI | PE | Total |
| VOC-1 | Athletic Care and First-Aid | | 2 | | 4 | 2 | | 2 | 4 | 15 | 35 | 15 | 35 | 100 |

Learning Objectives:

- Understand the roles and responsibilities of sports professionals in injury prevention and care.
- Learn basic first aid techniques and CPR relevant to athletic environments.
- Recognize and manage common sports injuries and medical conditions.
- Apply preventive strategies like taping, bracing, and warm-ups.
- Develop emergency action plans for sports settings.

For Paper Setter: Set eight questions in all. Question one is small answer type questions from all units. Each question of Seven marks.

For Students: Attempt any Five questions. Question One is compulsory. All questions carry equal marks.

Unit – 1 Foundations of Athletic Care:

- 1.1 Concept of Athletic Care: Meaning, Definition and Importance
- 1.2 Basics of health screening and pre-participation evaluation
- 1.3 Prevention strategies of Athletic Care: conditioning, warm-up, cool-down, equipment fitting
- 1.4 Role of coaches / first responder in Athletic care and Developing an Emergency Action Plan (EAP)

Unit - 2: Common Sports Injuries and Preventive Measures:

- 2.1 Types of Sports Injuries
- 2.2 Principles of Preventive Measures
- 2.3 Acute and chronic injuries to ankle, knee, shoulder, wrist, spine & head
- 2.4 Heat stroke, dehydration, hypothermia, choking and fainting

Unit - 3: First Aid and Injury Management:

- 3.1 Concept and Principles of first aid: assessment, triage, and safety
- 3.2 Recognition and immediate care of soft tissue injuries, hard tissue injuries, joint injuries, concussion and shock
- 3.3 Basic wound care, infection prevention and safe transport of injured athlete
- 3.4 Cardio Pulmonary Resuscitation (CPR)

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Unit - 4: Taping, Bandaging & Rehabilitation:

- 4.1 Principles of taping strapping and bandaging
- 4.2 Techniques for ankle, wrist, thumb, and knee taping
- 4.3 Basics of injury rehabilitation P.R.I.C.E.R.
- 4.4 Proprioceptive Neuromuscular Facilitation (PNF) and Passive Assistive Active Resistive (PAAR) exercises for rehabilitation.

Practical Work:

- First Aid Kit: Preparation of First Aid Kit.
- Vital Sign Monitoring: Heart Rate, Respiratory Rate, BP & Temperature
- Demonstration of CPR, PAAR
- Taping, Bandaging and transportation of injured athlete

Suggestive Readings:

1. Arnheim, D.D., Prentice, W.E. (2021), Principles of Athletic Training: A Guide to Evidence-Based Clinical Practice (17th ed.). New York: McGraw-Hill Education.
2. Almquist, J.L. (2016), Foundations of Athletic Training: Prevention, Assessment, and Management (5th ed.). Philadelphia: Wolters Kluwer Health.
3. Casa, D.J. (2014), Preventing Sudden Death in Sport and Physical Activity. Champaign, IL: Human Kinetics.
4. Flegel, M.J. (2011), Sports First Aid and Injury Prevention (5th ed.). Champaign, IL: Human Kinetics.
5. Perrin, D.H. (2012), Athletic Taping and Bracing (3rd ed.). Champaign, IL: Human Kinetics.
6. Kansal, D.K. (2013), Textbook of Athletic Care and Rehabilitation. New Delhi: Sports & Spiritual Science Publications.
7. Puri, K. & Goyal, R. (2015), First Aid and Sports Injuries Management. New Delhi: Khel Sahitya Kendra.
8. Sharma, V.M. (2011), Athletic Care and First Aid, New Delhi: Sports Publication.
9. American Red Cross (2017), First Aid/CPR/AED Participant's Manual. Washington, D.C.: American National Red Cross.

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