

Program	BS Physical Education	Course Code	PE-351	Credit Hours	02
Course Title	Sports Nutrition (Theory)				
Course Introduction					
This course focuses on the principles of sports nutrition, emphasizing the role of diet and nutrition in athletic performance, recovery, and overall health. Students will explore the nutritional requirements of athletes, dietary strategies for training and competition, and the impact of supplements and ergogenic aids. Practical sessions will provide hands-on experience in meal planning, dietary assessment, and evaluating nutritional supplements.					
Learning Outcomes					
On the completion of the course, the students will:					
- Understand the fundamental principles of sports nutrition. - Assess the nutritional needs of athletes based on their sport, training, and competition schedules. - Develop individualized nutrition plans to optimize performance and recovery. - Evaluate the role of macronutrients and micronutrients in athletic performance. - Analyze the effectiveness and safety of dietary supplements and ergogenic aids. - Apply knowledge of hydration strategies for athletes. - Understand the relationship between nutrition and injury prevention.					
Course Content					Assignments/Readings
Week 1	Introduction to Sports Nutrition - Course overview and expectations - Definition, Importance of Food and Nutrients obtained from food - Sports nutrition for maintaining health and improving sports performance				From Books and Class Lectures
Week 2	Macronutrients: Carbohydrates - Types and Sources - Metabolism and functions of carbohydrates - Carbohydrate loading - Glycemic Index				From Books and Class Lectures
Week 3	Macronutrients: Proteins - Functions, sources, recommended intake - Metabolism - Protein and exercise				From Books and Class Lectures
Week 4	Macronutrients: Lipids - Role of lipids in the body - Lipids as energy source and reserve				From Books and Class Lectures

	• Use of lipids during exercise	
Week 5	Micronutrients: Vitamins • Introduction, sources • Types, importance • Supplements, their uses, and importance	From Books and Class Lectures
Week 6	Micronutrients: Minerals • Introduction, sources • Types, Importance • Mineral intake, supplements	From Books and Class Lectures
Week 7	Water • Recommended water intake • Functions, Regulation of Body Temperature • Fuel & Electrolyte losses and replacements • Body regulation during exercise	From Books and Class Lectures
Week 8	Concept Of Human Energy • Definition and types of energy • Concepts of energy balance • Human Energy systems	From Books and Class Lectures
Week 9	Weight Management • BMI and BMR • Concepts of dieting • Physiological factors of weight management • Obesity	From Books and Class Lectures
Week 10	Nutrition For Optimal Health & Physical Performance • Balance Diet • Factors Affecting Balance Diet • Pre, during, and post-event nutrition	From Books and Class Lectures
Week 11	Food Supplements and Sports Performance • Ergogenic Aids • Food Supplements • Dietary recommendations for health & physical performance. • Case studies and real-life applications	From Books and Class Lectures
Week 12	Nutrition and Chronic Conditions • Cardiovascular Disease (CVD) (High Blood Cholesterol and Hypertension/High blood pressure) • Diabetes	From Books and Class Lectures

	• Obesity • Osteoporosis • Eating Disorders	
Week 13	Caffeine • Sources and Metabolism of Caffeine • Caffeine and Sports Performance • Case studies and practical applications	From Books and Class Lectures
Week 14	Special Considerations in Sports Nutrition • Nutrition for young athletes • Female athlete triad • Nutrition for ageing athletes	From Books and Class Lectures
Week 15	Energy Drinks and Sports Drinks • Effects, Benefits, Components and Risks of Energy Drinks • Effects, Benefits, Components and Risks of Sports Drinks • Difference Between Energy Drinks and Sports Drinks	From Books and Class Lectures
Week 16	Review and Final Exam Preparation • Review of key concepts • Mock exams and practice questions • Final exam preparation	From Books and Class Lectures

Textbooks and Reading Material

Textbooks

- Benardot, D. (2020). Advanced sports nutrition (3rd ed.). Human Kinetics.
- Burke, L., & Deakin, V. (2015). Clinical sports nutrition (5th ed.). McGraw-Hill Education.
- Dunford, M., & Doyle, J. A. (2018). Nutrition for sport and exercise (4th ed.). Cengage Learning.
- Jeukendrup, A., & Gleeson, M. (2018). Sports nutrition: From lab to kitchen (2nd ed.). Human Kinetics.
- McArdle, W. D., Katch, F. I., & Katch, V. L. (2015). Sports & exercise nutrition (4th ed.). Wolters Kluwer.
- Rosenbloom, C. A. (Ed.). (2012). Sports nutrition: A practice manual for professionals (5th ed.). Academy of Nutrition and Dietetics.

Suggested Readings

- **Journals:** International Journal of Sport Nutrition and Exercise Metabolism, Journal of the International Society of Sports Nutrition, Sports Medicine
- **Websites:** Academy of Nutrition and Dietetics, Sports Dietitians Australia, Gatorade Sports Science Institute
- **Videos:** Online tutorials and lectures on sports nutrition and meal planning