Program	BS Physical Education	Course Code	PE-352	Credit Hours	01
Course Title	**Sports Nutrition (Practical)**				

Course Introduction

The practical component of the Sports Nutrition course is designed to complement theoretical knowledge with hands-on experience. Students will engage in various activities, including dietary assessments, meal planning, cooking demonstrations, and field visits. These practical sessions aim to teach students how to apply nutritional principles to enhance athletic performance and overall health.

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 Practical Sessions** • Orientation to the laboratory and kitchen facilities • Safety and hygiene in food handling • Overview of practical session objectives and expectations	From Books and Class Lectures
Week 2	**Dietary Assessment Methods** • Training on using dietary assessment tools (24-hour recall, food diaries, food frequency questionnaires) • Practice sessions on collecting and analyzing dietary data	From Books and Class Lectures
Week 3	**Nutrient Analysis of Common Foods** • Use of nutrient analysis software (e.g., MyFitnessPal, Nutritics) • Hands-on practice in analyzing the nutrient content of various foods • Discussion on interpreting nutrient analysis results	From Books and Class Lectures

Week 4	**Energy Expenditure and Requirements** • Measuring resting metabolic rate (RMR) using indirect calorimetry • Calculating total daily energy expenditure (TDEE) for athletes • Case studies on energy requirements for different sports	From Books and Class Lectures
Week 5	**Meal Planning for Athletes** • Principles of meal planning for different training phases (pre-season, in-season, off-season) • Creating individualized meal plans for athletes based on their sport, position, and goals • Evaluating and adjusting meal plans based on feedback	From Books and Class Lectures
Week 6	**Hydration Strategies** • Assessing hydration status using urine colour charts and specific gravity measurements • Designing hydration plans for training and competition • Understanding the impact of hydration on performance and recovery	From Books and Class Lectures
Week 7	**Macronutrient Distribution** • Understanding the role of carbohydrates, proteins, and fats in sports nutrition • Creating meal plans with appropriate macronutrient distribution • Cooking demonstrations focused on high-carb, high-protein, and balanced meals	From Books and Class Lectures
Week 8	**Micronutrient Needs** • Identifying common micronutrient deficiencies in athletes • Planning meals rich in essential vitamins and minerals • Supplementation: benefits and risks	From Books and Class Lectures
Week 9	**Pre- and Post-Workout Nutrition** • Designing pre-workout meals and snacks for optimal performance • Creating post-workout recovery meals and snacks • Evaluating the effectiveness of different nutritional strategies	From Books and Class Lectures
Week 10	**Nutrition for Special Populations** • Planning for vegetarian and vegan athletes	From Books and Class Lectures

	• Managing food allergies and intolerances in athletes • Nutrition strategies for young athletes and ageing athletes	
Week 11	**Ergogenic Aids and Supplements** • Review of common ergogenic aids (e.g., caffeine, creatine, beta-alanine) • Evaluating the evidence for supplement efficacy and safety • Practical session on supplement preparation and consumption	From Books and Class Lectures
Week 12	**Sports Nutrition Myths and Misconceptions** • Debunking common nutrition myths in sports • Critical analysis of popular diets and nutrition trends • Group discussions and presentations	From Books and Class Lectures
Week 13	**Nutrition Counseling Skills** • Techniques for effective nutrition counseling and communication • Role-playing sessions to practice counseling athletes • Providing feedback and creating action plans	From Books and Class Lectures
Week 14	**Field Visit** • Visit a sports nutrition facility, such as a professional sports team or a sports performance centre • Observation and interaction with sports nutritionists and dietitians • Understanding the practical application of sports nutrition in a real-world setting	From Books and Class Lectures
Week 15	**Case Studies and Group Projects** • Working on case studies involving different sports and athletes • Group presentations on nutrition strategies and interventions • Peer review and feedback sessions	From Books and Class Lectures
Week 16	**Practical Exam and Review** • Practical exam assessing skills learned throughout the course • Review session and discussion of key learnings • Course wrap-up and feedback	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.