

SPORTS NUTRITION & DIETETICS

Course Code

PE-261

Credit Hours

3 (2-1)

Course Description:

This course introduces the fundamentals of nutrition and dietetics, focusing on their applications in sports and physical performance. Students will learn about the role of macronutrients, micronutrients, and hydration in athletic performance and dietary strategies for optimizing recovery and enhancing endurance and strength.

Course Learning Outcomes (CLOs):

By the end of this course, students will be able to:

1. Understand the principles of nutrition and its impact on physical performance.
2. Identify the nutritional needs of athletes based on sport type, intensity, and individual factors.
3. Develop individualized dietary plans for athletes and active individuals.
4. Evaluate the efficacy of various nutritional supplements.
5. Assess hydration strategies and the role of fluids in performance and recovery.

Course Content:

Week 1-2

Introduction to Nutrition Science

- Basic Concepts of Nutrition
- Energy Balance and Metabolism
- Nutritional Guidelines and Food Groups

Week 3-4

Macronutrients and Sports Performance

- **Carbohydrates:** Energy Sources and Requirements
- **Proteins:** Muscle Recovery and Growth
- **Fats:** Essential Fatty Acids and Energy Stores
- **Practical:** Assessing Macronutrient Intake through Dietary Logs

Week 5-6

Micronutrients and Athletic Health

- Role of Vitamins and Minerals in Recovery and Immunity
- Common Deficiencies in Athletes
- **Practical:** Designing a Micronutrient-rich Meal Plan

Week 7-8

Hydration and Electrolyte Balance

- Importance of Fluids in Thermoregulation
- Signs and Effects of Dehydration
- **Practical:** Conducting Hydration Status Tests and Creating Rehydration Plans

Week 9-10

Nutrition for Different Sports

- Energy Needs for Endurance vs. Strength Sports
- Pre-, During-, and Post-Event Nutrition

- Case Studies in Team and Individual Sports
- **Practical:** Simulating Event-Day Nutrition Strategies

Week 11-12

Nutritional Ergogenic Aids

- Overview of Supplements: Benefits and Risks
- Use of Protein Powders, Creatine, and Multivitamins
- Anti-Doping Regulations and Supplement Safety
- **Practical:** Evaluating Popular Supplements

Week 13-14

Specialized Diets and Nutrition Plans

- Vegan and Vegetarian Diets for Athletes
- Weight Management for Performance
- Nutrition Across Lifespan: Youth, Adults, Seniors
- **Practical:** Crafting Tailored Diet Plans

Week 15-16

Final Assessments and Practical Demonstrations

- Presentation of a Case Study-Based Nutritional Plan
- Theory Exam Covering All Topics

Teaching and Learning Methods:

- **Lectures:** Core principles delivered using multimedia presentations
- **Workshops:** Meal preparation and dietary planning activities
- **Practical Exercises:** Dietary analysis, hydration tests, and plan development
- **Case Studies:** Real-world scenarios in athletic nutrition
- **Group Projects:** Collaborating on team-specific nutrition strategies

Recommended Books (APA Style):

1. Burke, L. M., & Deakin, V. (2021). *Clinical sports nutrition* (6th ed.). Sydney, Australia: McGraw-Hill Education.
2. Jeukendrup, A., & Gleeson, M. (2018). *Sport nutrition: An introduction to energy production and performance* (3rd ed.). Champaign, IL: Human Kinetics.
3. Manore, M., Meyer, N., & Thompson, J. (2017). *Sports nutrition for health and performance* (2nd ed.). Champaign, IL: Human Kinetics.
4. Maughan, R. J. (Ed.). (2019). *The Encyclopedia of Sports Medicine: Nutrition in sport* (2nd ed.). Hoboken, NJ: Wiley-Blackwell.
5. Eberle, S. G. (2022). *Endurance sports nutrition* (4th ed.). Champaign, IL: Human Kinetics.