

Course Title: Sports Nutrition
Code Number: HPE-303
Credit Hours: 03 hrs
Pre-Requisites course Requirement/Skills: Nil

Objectives of Course

At the successful completion of this course students will be able:

- 1) Health of the athlete is of paramount importance and needs due considerations.
- 2) The knowledge regarding different components of nutrition and their implications upon human body in general and loss or gain of weight, appetite, use of different components of foods to remove the deficiencies of sodium and calcium or any other basic ingredients will prove helpful to the Physical Educators.

Course Contents

Unit-I Introduction

- 1.1 Definition, Importance of Food and Nutrients obtained from food
- 1.2 Sports nutrition for maintaining health and improving sports performance

Unit-II Concept of Human Energy

- 2.1 Definition and types of energy
- 2.2 Human Energy systems

Unit-III Carbohydrates

- 3.1 Types and Sources
- 3.2 Metabolism and functions of carbohydrates
- 3.3 Carbohydrate loading
- 3.1 Glycemic Index

Unit-IV Lipids

- 4.1 Role of lipid in the body
- 4.2 Lipid as energy source and reserve
- 4.3 Use of lipid during exercise

Unit-V Proteins

- 5.1 Functions, sources, recommended intake
- 5.2 Metabolism
- 5.3 Protein and exercise

- 5.4 BMI
- a. BMR

Unit-VI Vitamins

- 6.1 Introduction, sources
- 6.2 Types, importance
- 6.3 Supplements its uses and importance

Unit-VII Minerals

- 7.1 Introduction, sources
- 7.2 Types, Importance
- 7.3 Mineral intake, supplements

Unit-VIII Water

- 8.1 Recommended water intake
- 8.2 Functions, Regulation of Body Temperature
- 8.3 Fuel & Electrolyte losses and replacements
- 8.1 Body regulation during exercise

Unit-IX Weight Management

- 9.1 Concepts of dieting
- 9.2 Physiological factors of weight management
- 9.3 Obesity

Unit-X Nutrition for Optimal Health & Physical Performance

- 10.1 Balanced diet
- 10.2 Pre, during and post contest meal
- 10.3 Dietary recommendations for health & physical performance
- 10.4 Food supplements

Unit-XI Eating Disorders

- 11.1 Eating disorders of depressed athlete
- 11.2 Caffeine's effects on metabolism

Teaching Learning strategies

- a) Inquiry based learning
- b) Cooperative Learning

- c) Multimedia usage
- d) Concrete examples
- e) Think -Pair-Share

Assessment and Examination

#	Elements	Weightage	Details
1	Theory Examination based Assessment	40%	It takes Place at the mid-point of the semester. It is mostly in the form of a test but owing to the nature of the course. The teacher may assess their students based on term paper, research proposal development, field work and report writing etc.
2	Formative Assessment	60%	It is continuous assessment. It includes classroom Participation, attendance, assignments and Presentations, homework, attitude, and behavior, hands on activities, short test, quizzes etc.

Recommended Books

1. Fink, H. H., & Mikesky, A. E. (2017). *Practical applications in sports nutrition*. Jones & Bartlett Learning.
2. Bean, A. (2017). *The complete guide to sports nutrition*. Bloomsbury Publishing.
3. Harris, S. S., Anderson, S. J., & American Academy of Orthopaedic Surgeons. (2018). *Care of the young athlete*.
4. Thompson, J. J., & Manore, M. (2015). *Nutrition for Life: Books a la Carte Edition*. Benjamin-Cummings.
5. Nutrition for All: Hamid I B & Zafar Iqbal Butt