Syllabus: Sports Hydration

BARÇA INNOVATION HUB Universitas

SYLLABUS

- Objectives
- Skills
- Bibliography
- Criteria for participation and approval

MODULES

- Module 1. Water in the body
- Module 2. Hydration in exercise
- Module 3. The use of liquids, carbohydrates and electrolytes
- Module 4. Integration

Objectives

Setting goals allows you to have a concrete idea of what you intend to achieve by partaking in the learning and teaching process that is taking this course. But the case for setting goals is even stronger yet: it allows for the establishment of what needs to be done in order to fulfill the very purpose for which the goals were set.

To achieve these goals, you should complete this course as designed, going through the different stages of the course.

If you complete the course as instructed, you will be equipped to achieve the following objectives:

Overall objective

Learn the most relevant concepts regarding hydration and its role in sports.

Specific objectives

1. Incorporate the basic concepts of thermoregulation in the context of physical effort.
2. Develop safe hydration strategies to implement throughout different athletic disciplines.
3. Recognize key aspects of hydration to keep in mind before, during, and after effort.

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Skills

We hope you will develop the following skills throughout the course:

General skills

1. **Teamwork and collaboration:** the ability to work together with colleagues in order to achieve shared goals and develop high performance-level group synergy.
2. **Capacity for analysis and reflection:** the ability to methodically examine the varying aspects of a situation or set of facts and make an assessment.
3. **Creative and innovative solutions based on knowledge:** the ability to provide innovative alternative solutions to existing problems based on formal learning.

Specific skills

- Incorporate the ability to design safe hydration strategies for implementing before, during, and after training sessions and competition.

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Criteria for participation and approval

Participation criteria

During the month of course, the student is expected to:

- [ ] Browse the multimedia contents of each of the modules that make up the course.
- [ ] Solve the evaluations assigned in each module.
- [ ] Carry out the proposed activities, whether group or individual.
- [ ] Take the final exam.

Approval criteria

For the approval of the course, the student is required to complete the (4) proposed activities in the course and pass the final exam. The student must obtain a final score of 70% or more. This grade will be the average between the activities and the final exam.

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Module 1. Water in the body

Unit 1.1 Introduction

1.1.1 The Function of Water

1.1.2 Distribution of Body Water and its Composition

1.1.3 Fluid Balance

1.1.4 Recommendations for Water Intake

Unit 1.2 Thermoregulation

1.2.1 Thermal Balance and Temperature Regulation

1.2.2 Thermoregulation and Cold Temperatures

1.2.3 Thermoregulation and Heat

1.2.4 Factors that Modify Heat Tolerance

CONTINUE

Module 2. Hydration in exercise

Unit 2.1 Dehydration and Performance

2.1.1 The Effects of Dehydration on Performance

2.1.2 Heat-Related Complications

2.1.3 Sweat Loss and Electrolyte Loss in Exercise

2.1.4 Guidelines of the American College of Sports Medicine (ACSM)

Unit 2.2 Assessing Perspiration Status

2.2.1 Total Body Water

2.2.2 Osmolality in the Plasma

2.2.3 Urinary Indicators (Color, Specific Gravity, and Osmolarity)

2.2.4 Body Weight and Sweat Rate

CONTINUE

Module 3. The use of liquids, carbohydrates and electrolytes

Unit 3.1 Sports Drinks

3.1.1 Historical Overview

3.1.2 The Role of Sports Drinks

3.1.3 Designing Homemade Sports Drinks

3.1.4 Exercise-Associated Hyponatremia

Unit 3.2 Other Issues to Consider

3.2.1 Using Other Drinks in Exercise

3.2.2 Supplements and their Impact on Hydration

3.2.3 Adaptability to Sports Drink Consumption

3.2.4 Designing Hydration Plans

CONTINUE

Module 4. Integration

Integration

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