

# SAGRADO

Universidad del Sagrado Corazón

## SCHOOL OF HEALTH AND SCIENCES

### SYLLABUS

**TITLE:** Nutrition, Human Performance, and Health

**CODE:** CFI 411

**CREDITS:** 3 credits | 45 contact hours | 1 term

#### DESCRIPTION

This course contains the combination of concepts of nutrition, healthy eating, physical effort and caloric expenditure, and the development of a program of physical conditioning and maintenance of health. Nutrition-related studies emphasizing physiological benefits for improving human and health performance are also discussed. It is a theoretical course that consists of identifying the nutritional needs of the individual whose performance ranges from recreational effort to elite status or high level of performance, while studying the role played by diet to achieve optimal adaptations of physiological training. This course emphasizes understanding the digestion, absorption, and metabolism of macronutrients, micronutrients, and water. This course has as a priority to provide the necessary tools to the student to master the nutritional recommendations necessary for the participation of recreational or sports physical activities with the necessary food intake for a performance free of injuries and in an optimal state of health.

#### JUSTIFICATION

By introducing the basic principles of nutrition, the student will be better prepared for the development of a stronger and healthier functional capacity by responding to a physical exertion work plan. Today, nutrition-related issues are of paramount importance and have evolved into public knowledge. One of the most important reasons in terms of knowledge is the relationship between nutrition and certain health conditions that can represent limitations to physical performance and health. Upon completion of the course, the student will have full knowledge of nutrition methods and eating patterns aimed at physical performance and health.

## **COMPETENCES**

The course develops the following competences in students:

- **Critical questioning**
- **Innovation and entrepreneurship**
- **Communication**
- **Ethical sense and social justice**

## **OBJECTIVES**

After completion of the course, students will be able to:

1. Value the need for a good diet.
2. Apply the knowledge acquired to the diet necessary for the development and maintenance of health.
3. List nutrients, describe their function in the body, and identify the foods that provide them in our dietary intake.
4. Describe terminology related to all aspects of nutrition.

## **CONTENTS**

- I. Definition and concepts of nutrition: calorie, nutrition, diet, obesity, overweight, physical performance, and exercise
- II. Functions of food and their relationship to health
- III. Nutritional values
  - A. Types of food
  - B. Serving size (quantity)
  - C. Nutrients
  - D. Functions
- IV. Nutrients and the Foods That Contain Them
  - A. Carbohydrates
  - B. Fats
  - C. Proteins
  - D. Minerals
  - E. Vitamins
- V. Daily Diet Assessment
- VI. Nutrition Labels and Facts
- VII. Macronutrients for Exercise and Physical Activity

- VIII. Recommendation of carbohydrate intake during the different stages of training
  - A. Before
  - B. During
  - C. After (recovery)
- IX. IX. Hydration and Athletic Performance
  - A. Function of water
  - B. Sports beverages
  - C. Dehydration and its effects
- X. Supplements A and B for Athletes
- XI. Health & Nutrients
  - A. Vitamins vs. minerals controversy
  - B. Diets and heart disease
  - C. Lipids and cholesterol
  - D. Nutrition research
- XII. Benefits of Nutrition
  - A. Physiological
  - B. Biological
  - C. Psychological
  - D. Social
- XIII. Nutritional Requirements and Planning of Diets and Healthy Eating Patterns for Children, Young Adults, Seniors, and Athletes

## **METHODOLOGY**

The following strategies from the active learning methodology are recommended:

- Lectures
- Discussion (panels as a learning strategy)
- Problem based learning (field situations)
- Collaborative learning
- Films

## EVALUATION

Partial assignments	40%
Oral presentation	20%
Compositions	20%
Final project or exam	20%
<b>Total</b>	<b>100%</b>

## LEARNING ASSESSMENT

The institutional assessment rubric is applied to the course's core activity.

## BIBLIOGRAPHY

### TEXTBOOK

Karpinski, C., Rosenbloom, C., A. (Eds.). (2017). *Sports Nutrition. A Handbook for Professionals* (6<sup>th</sup> ed.). Academy of Nutrition and Dietetics

### REFERENCES

Belski, R., Forsyth, A., & Mantzionis, E. (Eds.). (2019). *Nutrition For Sports, Exercise and Performance. A Practical Guide For Students, Sports Enthusiasts and Professional*. Allen & Unwin.

Dunford, M., Doyle, J. A. (2019). *Nutrition for Sport and Exercise* (4<sup>th</sup> ed.). Cengage.

Kang, J. (2018). *Nutrition and Metabolism in Sports, Exercise and Health* (2<sup>nd</sup> ed.).  
Routledge.

Mangieri, H. (2016). *Fueling Young Athletes*. Human Kinetics, Inc.

McArdle, W. D., Katch, F. I., & Katch, V. I. (2013). *Sports and Exercise Nutrition*. (4<sup>th</sup> ed.). Wolters & Kluwer.

Morrow Jr., J. R., Mood, D. P., Disch, J. G., & Kang, M. (2016). *Measurement and Evaluation in Human Performance* (5<sup>th</sup> ed.). Human Kinetics, Inc.

Reaburun, P.R.J. (2015). *Nutrition and Performance in Master's Athletes*. CRC Press

Taylor & Francis Group.

Thompson, J.L., Manore, M.M., & Vaughan, L.A. (2019). *The Science of Nutrition* (5<sup>th</sup> ed.). Pearson.

Spano, M.A., Kruskall, L.J. (2018). *Nutrition for Sport, Exercise, and Health*. Human Kinetics, Inc.

Williams, M. H., Pawson, E. S., & Branch, J. D. (2017). *Nutrition for Health Fitness and Sport*. McGraw Hill Publishing

Urribarri, J., Vessaotti, J. (Eds.). (2020). *Nutrition, Fitness, and Mindfulness*. Springer

For more information resources related to the course's topics, access the library's webpage <http://biblioteca.sagrado.edu/>

## **REASONABLE ACCOMMODATION**

For detailed information on the process and required documentation you should visit the corresponding office. To ensure equal conditions, in compliance with the ADA Act (1990) and the Rehabilitation Act (1973), as amended, any student in need of reasonable accommodation or special assistance must complete the process established by the Vice Presidency for Academic Affairs.

## **ACADEMIC INTEGRITY**

This policy applies to all students enrolled at Universidad del Sagrado Corazón to take courses with or without academic credit. A lack of academic integrity is any act or omission that does not demonstrate the honesty, transparency, and responsibility that should characterize all academic activity. Any student who fails to comply with the Honesty, Fraud, and Plagiarism Policy is exposed to the following sanctions: receive a grade of zero in the evaluation and / or repetition of the assignment in the seminar, a grade of F (\*) in the seminar, suspension, or expulsion as established in the Academic Integrity Policy effective in November 2022.

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