SAGRADO
Universidad del Sagrado Corazón

SCHOOL OF HEALTH AND SCIENCES

SYLLABUS

TITLE:	Strength Training
CODE:	CFI 402
PREREQUISITE:	CFI 204
CREDITS:	3 credits | 45 contact hours | 1 term

DESCRIPTION

The physiological, biomechanical, and motor fundamentals are applied in the training and development of the strength component. This training is aimed at the development of a better state of health and excellence in sports performance. Emphasis is placed on terminology, systems, methods and theories, and specialized equipment.

JUSTIFICATION

Both health development and athletic excellence are related to the development of muscle strength and endurance, i.e., the anaerobic components of physical fitness. It is necessary for professionals related to physical fitness to be able to prescribe appropriate exercises for the development of strength, power, and muscular endurance. They must know how to use the various equipment and training systems in order to use them safely.

COMPETENCES

The course develops the following competences in students:

- **Critical questioning**
- **Research and exploration**

OBJECTIVES

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

1. Identify the different physiological principles related to anaerobic training.
2. Identify the different methods of anaerobic training.

3. Describe the equipment to be used in anaerobic training.
4. Prepare an anaerobic training program considering the advantages of each training method.

CONTENTS

C. Resistance training for older adults

VII. Anatomical Adaptation Phase

A. Standardized programs

VIII. Hypertrophy Phase

A. Design of the hypertrophy stage

IX. Maximum Force Phase

A. Physiology of maximal strength training

X. Specific Force Conversion Phase

A. Power training methods

XI. Statistics

A. Descriptive statistics

B. Inferential statistics

C. Central tendency

D. Variability

E. Prediction

F. Correlation

METHODOLOGY

The following strategies from the active learning methodology are recommended:

- Service based learning
- Immersion experiences
- External practices
- Problem based learning (case method)

EVALUATION

Participation	10%
Partial assignments	40%
Oral presentation	15%
Final project or exam	20%
Immersion experience	15%
Total	**100%**

LEARNING ASSESSMENT

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

BIBLIOGRAPHY

TEXTBOOK

Haff, G.G., Triplett, N.T. (Eds.). (2015). *Essential of Strength Training and Conditioning by NSCA*. (4th ed.). Human Kinetics, Inc.

REFERENCES

American College Sports Medicine. (2020). *ACSM's Guideline for Exercise Testing and Prescription*. (10*th* ed.). Wolters Kluwer.

Bompa, T. O., Buzzichelli, C. A. (2018). *Periodization: Theory and Methodology of Training*. (6th ed.). Human Kinetics, Inc.

Kenney, W. L., Wilmore, J., & Costill, D. L. (Eds.). (2020). *Physiology of Sport and Exercise*. (7th ed.). Human Kinetics, Inc.

Kramer, W. J., Fleck, S. J., & Deschenes, M. R. (2016). *Exercise Physiology. Integrations Theory and Application*. (2nd ed.). Lippincott William & Wilkins.

McArdle, W. D., Katch, F. I., & Katch, V. I. (2014). *Exercise Physiology*. (7th ed.). Wolters Kluwer.

Marieb, E.N. (2015). *Essentials of Human Anatomy and Physiology*. (11th ed.). Pearson.

Plowman, S. A., Smith, D.L. (2017). *Exercise Physiology for Health Fitness and Performance*. (5th ed.). Wolters Kluwer

Radak, Z. (2018). *The Physiology of Physical Training*. (1st ed.). Academic Press.

Turner, A., Comfort, P. (Eds.). (2018). *Advance Strength and Conditioning: An Evidence Based Approach*. Routledge

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.