

Syllabus

MODULE 1: Strength Evaluation in Team Sports

Unit 1: Strength Evaluation in Team Sports

- 1.1.1 The Concept of Strength Related to the Field of Sports
- 1.1.2 Strength Evaluation: Concepts and Objectives
- 1.1.3 Measurements in Isokinetic Activations
- 1.1.4 Measurements in Isometric Activations

Unit 2: Assessing Strength in Different Manifestations

- 1.2.1 Measurements in Isoinertial Activations (Free Weights) in (Concentric) Miometric Action and Jumps (Intense SSC) with and without Technology
- 1.2.2 Strength Evaluation in Sports Training: Initial Reflections
- 1.2.3 The RM for Strength Training Load Determination: Use, Problems and Proposals
- 1.2.4 Evaluation of the Stretch-Shortening Cycle (SSC). Evaluation of Explosive Strength through Jumping Ability

MODULE 2: Speed and Agility Assessments

Unit 1: Generalities about the Evaluation of Change of Direction Speed and Agility

- 2.1.1 Introduction to Speed and Agility Assessments
- 2.1.2 Evaluation of Change of Direction Speed
- 2.1.3 Characteristics and Classification of Different Change of Direction Tests
- 2.1.4 Cognitive Considerations for the Assessment of Agility

Unit 2: Evaluation of Change of Direction Speed (Closed Skill Agility) and Agility (Open Skill Agility)

- 2.2.1 Programmed or Closed Agility Assessment
- 2.2.2 Non-Programmed or Open Agility Assessment
- 2.2.3 Repeated Sprint Acceleration Tests (RSA)

MODULE 3: Endurance Assessment in Team Sports

Unit 1: Assessment of Aerobic and Anaerobic Physical Condition in Athletes

- 3.1.1 Objectives for the Assessment of Endurance in Sports
- 3.1.2 Types of Assessment
- 3.1.3 Test Classifications



Unit 2: Field Endurance Tests in the Context of Sports

3.2.1 General Endurance Test I

3.2.2 General Endurance Test II

3.2.3 Considerations on Maximal Field Tests (Cyclic and Acyclic) for Determining Training Speed

3.2.4 Determination of Running Speed in Submaximal and Supramaximal Training

MODULE 4: Integrative reading

References

Bangsbo J, Iaia FM, and Krstrup P. (2008) The Yo-Yo intermittent recovery test. *Sports Med* 38: 37–51, 2008

Beachle T. Earle R. (2007). Principios del entrenamiento de la fuerza y del acondicionamiento físico [Principles of strength training and physical fitness]. Editorial Panamericana.

Berthon P, Fellmann N, Bedu M, Beaune B, Dabonneville M, Coudert J, and Chamoux AA. (1997). 5-min running field test as a measurement of maximal aerobic velocity. *Eur J Appl Physiol Occup Physiol* 75: 233-238.

Bosco C. (2000). La Fuerza Muscular [Muscular Strength]. Editorial Inde. Barcelona. Spain.

Buchheit M. (2005). The 30-15 intermittent fitness test: A new intermittent running field test for intermittent sport players-Part 1. *Approaches Handball* 87: 27-34.

Buchheit M. (2005). Illustration of interval-training prescription on the basis of an appropriate intermittent maximal running speed-the 30- 15 intermittent fitness test—part 2. *Approaches Handball* 88: 36-46.

García Manso, J. M., Navarro, M., Caballero, J.A (1996). Pruebas para la valoración de la capacidad motriz en el deporte [Tests for Motor Capability Assessment in Sports]. Editorial Gymnos. Madrid, Spain.

González Badillo J., Gorostiaga Ayestarán E. (1995). Fundamentos del entrenamiento de la fuerza [Fundamentals of strength training]. Aplicación al alto rendimiento [High performance application]. Editorial Inde. Barcelona. Spain.

González Badillo, J.J.; Ribas Serna, J. (2002). Programación del entrenamiento de la fuerza. [Programming of strength training]. INDE. Barcelona. Spain.

Krstrup P, Mohr M, Amstrup T, Rysgaard T, Johansen J, Steensberg A, Pedersen P, and Bangsbo J. (2003). The yo-yo intermittent recovery test: Physiological response, reliability, and validity. *Med Sci Sports Exerc* 35: 697–705..

Little T, Williams AG. (2005). Specificity of acceleration, maximum speed, and agility in professional soccer players. *J Strength Cond Res*; 19(1):971-77. 76-8.

Naclerio F. (2011). Entrenamiento Deportivo (Sports Training). Ed. Médica Panamericana. Madrid: Spain.



Sheppard JM, Young WB. (2006). Agility literature review: classifications, training and testing. J Sports Sci 2006; 24 (9): 919-32.

Sporis, G, Jukic, I, Milanovic, L, and Vucetic, V. (2010). Reliability and factorial validity of agility tests for soccer players. J Strength Cond Res 24(3): 679-686.

Young WB, James R, Montgomery I, et al. (2002). Is muscle power related to running speed with changes of direction? J Sports Med Phys Fitness.

Objectives

By establishing objectives, we give ourselves a clear idea of what we want to achieve once the teaching and learning process of this course has finished. But our aims are even more specific: we also want to establish what you will need to accomplish in order for this new knowledge to contribute to your educational goals.

To achieve these objectives, you must complete the entire process laid out in the different stages of the course.

Thus, if you work in the way suggested, you will be well-positioned to meet the following objectives:

General Objective

- Become familiar with new developments in assessment processes for team sports.

Specific Objectives

- Learn how to apply tests for diverse manifestations of strength in team sports.
- Gain knowledge about different tests for evaluating speed and agility in team sports.
- Know how to apply different tests for endurance in team sports.

Skills

The skills we hope you will develop throughout this course are:

General Skills

- Group and collaborative work: the ability to work with colleagues in order to accomplish shared goals and to achieve the synergy typical of a high performance group.
- The capacity of analysis/reflection: the capacity to methodically examine the different aspects of a certain reality or situation and to carry out an assessment of that situation.
- Creativity and innovative, knowledge-based solutions: the capacity to find alternative solutions to existing problems based on formal knowledge.

Specific Skill

- Develop the ability to plan out an assessment, analyzing different motor skills and obtaining measurements that will later be considered in the context of the training process.