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| <b>ID</b>                | 2682  |
| <b>Curricular Unit</b>   | Physical Conditioning   |
| <b>Regent</b>            | Francisco José Bessone Ferreira Alves   |
| <b>Learning Outcomes</b> | <ol style="list-style-type: none"> <li>1. To promote a critical look at the theories that support physical conditioning;</li> <li>2. To recognize and analyse the theoretical basics of the means and methods of physical conditioning;</li> <li>3. To recognize and analyse the physical and physiological performance assessment procedures;</li> <li>4. To identify research lines regarding physical training and conditioning showing relevance for field practice.</li> </ol>   |
| <b>Syllabus</b>          | <ol style="list-style-type: none"> <li>1. Muscle strength. Basic definitions and concepts. Factors affecting force production characteristics. Neural, muscular and biomechanical factors. Methodological issues. Types and components of muscle strength. Development methods. Classifications. Diagnostic and evaluation procedures.</li> <li>2. Endurance. Definitions and goals. Endurance training methods. Classifications. Intensity zones. Continuous and interval training methods. General and specific endurance training. Diagnostic and evaluation procedures.</li> <li>3. Velocity. Concept and conditioning factors. Types and components: classification criterions. Training methods. Diagnostic and evaluation procedures.</li> <li>4. Flexibility. Basic neuromuscular factors. Training methods. Diagnostic and evaluation procedures.</li> </ol> |
| <b>Evaluation</b>        | <p>Expository method and thematic discussions emphasizing commented reading of critical scientific papers focusing themes similar to those that constitute the main core of the course. Complementary laboratory sessions regarding physiological adaptations to training, strengthening work performed in the curricular unit of MTICD and also illustrative practical examples of training methods for discussion and further comprehension of the processes involved. Evaluation is made through a written exam. Students are supposed to attend, at least, 75% of the classes. Minimum grade in the exam is 10.0.</p>   |

## **Bibliography**

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- Gore CJ (ed.), Physiological tests for elite athletes. Champaign: Human Kinetics.
- Hoffman J (2002). Physiological aspects of sport training and performance. Champaign: Human Kinetics.
- Kraemer WJ, Hakkinen K (Eds.) (2002). Strength training for sport. Oxford: Blackwell Science Ltd.
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- Nigg BM, Macintosh BR, Mester J (eds) (2000). Biomechanics and biology of movement. Champaign: Human Kinetics.
- Stone M, Stone M, Sands W (2007). Principles and practice of resistance training. Champaign: Human Kinetics.
- Zatsiorsky VM, Kraemer WJ (2006). Science and Practice of Strength Training (2nd Edition). Champaign: Human Kinetics.