

PHYSIOLOGY OF PERFORMANCE (CODE: 2024067)

COURSE SYLLABUS:

The course covers investigations related to studies of biomechanical, physiological factors, recovery and training loads, effects of physical exercise, combined or not with other interventions, on structures, processes and mechanisms related to improvement and analysis of physical and sports performance.

GOALS:

- To present the physiologic systems and their role in physical performance.
- To update the knowledge about exercise sciences researches.
- To discuss the methods used to improve physical performance and recovery.

BIBLIOGRAPHY:

Básica:

MCARDLE, W.; KATCH, F. I.; KATCH, V. L. Fisiologia do Exercício. Energia, Nutrição e Desempenho Humano. 6ª edição. Rio de Janeiro: Guanabara Koogan, 2008.

POWERS, S. K. & HOWELEY. Fisiologia do Exercício – Teoria e Aplicação ao condicionamento e ao desempenho. 6ª edição. Editora Manole, São Paulo, 2009.

BROOKS, G.; FAHEY, D.; BALDWIN, K.; Fisiologia do exercício: Bioenergética humana e suas aplicações. 4ª edição. São Paulo, Phorte editora.

Complementar:

A predictive model of fatigue in human skeletal muscles. *J Appl Physiol* 89: 1322–1332, 2000
Ischemic preconditioning of the muscle improves maximal exercise performance but not maximal oxygen uptake in humans *J Appl Physiol* 111: 530–536, 2011.

Augmented Growth Hormone (GH) Secretory Burst Frequency and Amplitude Mediate Enhanced GH Secretion during a Two-Day Fast in Normal Men. *Journal of Clinical Endocrinology and Metabolism* Copyright 1992 by The Endocrine Society

Effects of caloric restriction and overnight fasting on cycling endurance performance 23(2)/560–570 *Journal of Strength and Conditioning Research* 2009 National Strength and Conditioning Association.

Lactate metabolism: a new paradigm for the third millennium J Physiol. 2004 Jul 1;558(Pt 1):5-30

Myths and Facts About the Effects of Ischemic Preconditioning on Performance Int J Sports Med. 2016 Feb;37(2):87-96

Half-time strategies to enhance second-half performance in team-sports players: a review and recommendations. Sports Med. 2015 Mar;45(3):353-64

The 'Critical Power' Concept: Applications to Sports Performance with a Focus on Intermittent High-Intensity Exercise Sports Med. 2017 Mar;47(Suppl 1):65-78

Evidence that a central governor regulates exercise performance during acute hypoxia and hyperoxia J Exp Biol. 2001 Sep;204(Pt 18):3225-34.