



FEDERAL UNIVERSITY OF SÃO CARLOS
CENTER OF BIOLOGICAL AND HEALTH SCIENCES
GRADUATE PROGRAM IN PHYSICAL THERAPY
Concentration: Evaluation and Intervention Processes in Physical Therapy
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COURSE: FIT 111 - Skeletal Muscle Plasticity: Implications for Physical Therapy

Credits: 6

Course load: 90 hrs.

Instructor: Tania de Fátima Salvini, Ph.D.

Course Overview:

- a) To characterize the factors responsible for skeletal muscle plasticity.
- b) To present the different mechanisms involved in skeletal muscle plasticity, emphasizing the adaptations to physical activity (exercise and training) and inactivity (disuse and denervation).
- c) To discuss the different factors associated with skeletal muscle atrophy associated with body posture and immobilization.
- d) To discuss the effectiveness of different clinical models used in muscle stretching programs.
- e) To present the characteristics of skeletal muscle injury and its regeneration.
- f) To discuss the neuromuscular mechanisms associated with skeletal muscle injury and regeneration.

Course Materials:

1. Richard Lieber. Skeletal muscle structure and function. Williams & Wilkins, Baltimore, USA, 1992.
2. Jack H Wilmore, David L Costil. Physiology of Sport and Exercise. Human Kinetics, USA, 1999
3. Andrew G Engel, Betty Q Banker. Myology . Editora McGraw Hill, 1996