




**Second Course "Motion Analysis and clinics:  
why to set up a Motion Analysis Lab ?"**

**TRAMA Project**

**January 14 - 17<sup>th</sup> 2008**

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**University of the Rosario**  
*Faculty of Rehabilitation and Human Development*  
**ErgoLab**  
Unit of Investigation in  
**DISORDERS OF THE MOTION IN PRODUCTIVE ACTIVITIES**

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The slide features a decorative vertical border on the left side with a grey arrow pointing down in the top-left corner and a stylized grey pattern below it. The main content is centered and includes the University of the Rosario logo, faculty name, and the specific course title and dates.

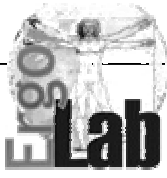


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Wath is?



**the human motion in productive activity**

this unit of research, contributes to the development of strategies in the field of the labor risks for the prevention of lesions associated to the human motion and to the intensive demand in the muscle-skeletal structures

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**Objective :**

to integrate diverse domains of knowledge that study the motion and the human activity, from the perspective of the efficiency, structure and limit.

**specific objectives:**

- to design tests, studies and analysis that contribute to the production of knowledge of the human motion in diverse productive contexts.
- to integrate to the study of the productive human motion, the biomechanics, the physiology, the ergonomics, the prevention and the qualification
- to develop basic and applied investigation, in the study of the problems associated to the motion in the work, in the sport and in the processes of labor reinstatement (workers' qualification).

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This unit, studies the human motion from divers perspectives:

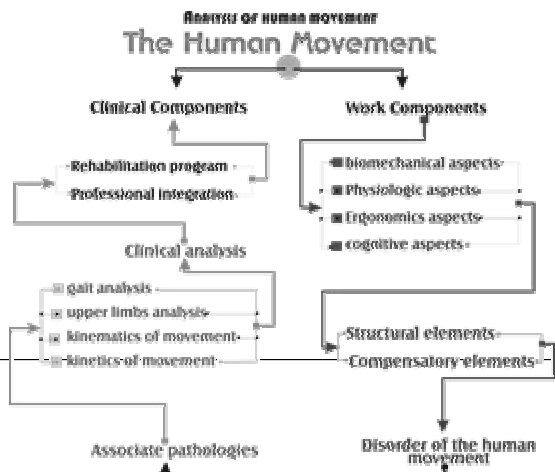
1. ergonomic (study of the Human activity in the labor environment),
2. physiologic (study of the physiologic and biomechanical indicators of the human motion),
3. qualification (study of the adaptability of the human motion).

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This unit of investigation of the human motion search to present models of the human movement in productive activity. This models contribute to the development of theories or action strategies in the environment of the labor risks.

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**The problems associated to the analysis of the motion in the work.**

1. repeated movements
2. repeated efforts
3. but tasks in smaller time
4. extended work days
5. absence of tools to diagnose lesions
6. most of the pathologies don't have a clear origin
7. injure difficult to diagnose
8. it is not possible to establish cause relationship
9. it is difficult the rehabilitation process


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**The model of Intervention**

rehabilitation program  
prevention program




**RESULTS**




clinical evaluation  
gait analysis  
upper limbs analysis


**Company - ErgoLab**




ergonomic evaluation  
analysis of the motion in the work  
identification of the analysis unit



specific studies



physical evaluation  
- physiologic, biomechanics, cognitive indicators  
- structure of the activities



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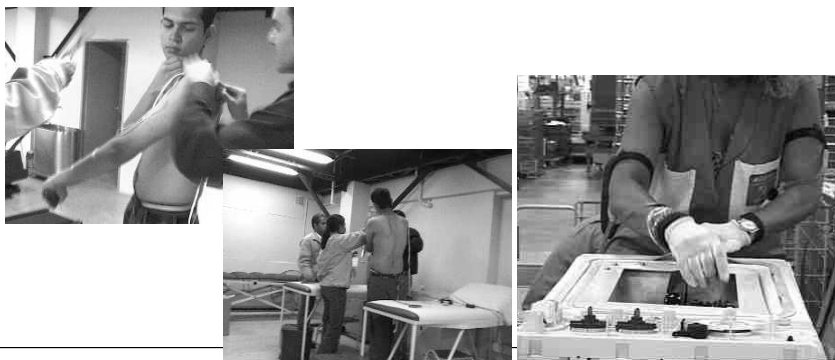
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## Intervention principles

1. study the work in real situation
2. register the worker's activity without altering the work conditions
3. identify the organization of the work
4. identify the functional limitations of the workers
5. identify the compensation strategies
6. establish the muscular activity
7. establish the periods of muscular activation
8. establish the corporal segments involved in the activity
9. evaluate the global structure of the motion in the work situation
10. establish the complexity of the movement

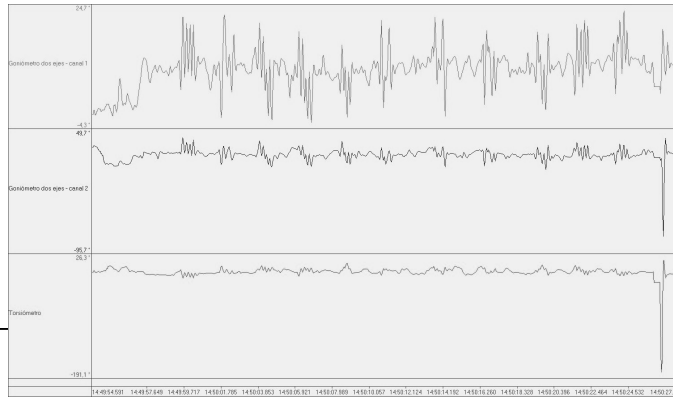
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## Results - graphics



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