

|                          |   |
|--------------------------|---|
| <b>ID</b>                | 2413  |
| <b>Curricular Unit</b>   | Risk Analysis in Occupational Context   |
| <b>Regent</b>            | Maria Filomena Araújo Costa Cruz Carnide  |
| <b>Learning Outcomes</b> | <p>The UC ARCO focuses its content on Ergonomics Intervention in different production contexts: Industrial; Hospital; Transportation and New Technologies. The syllabus includes the main methods, techniques and fundamentals of ergonomics intervention in mentioned contexts. It is expected that students attain skills at following levels:</p> <ul style="list-style-type: none"> <li>- To plan an intervention methodology appropriate to the nature and specificity of the proposed problems;</li> <li>- To consolidate the basic principles and concepts linked to the ergonomics practice;</li> <li>- To identify and apply tailored methods, techniques or instruments to the specific nature of the problem under study and the various moments of ergonomic intervention;</li> <li>- To establish a diagnosis of work conditions as result from previous ergonomics analysis.</li> </ul>   |
| <b>Syllabus</b>          | <ul style="list-style-type: none"> <li>I- Industrial ergonomics               <ol style="list-style-type: none"> <li>1. Introduction to Industrial Ergonomics</li> <li>2. Basis for assessing the risk of mechanical exposure.</li> <li>3. Methodological approaches for assessing exposure</li> <li>4. Methods of exposure assessment</li> </ol> </li> <li>II- Hospital ergonomics               <ol style="list-style-type: none"> <li>1. Approach to National Health System</li> <li>2. Ergonomics and Occupational Health in Hospitals</li> <li>3. Features of Working in Hospital Context</li> <li>4. Main Risk Factors</li> </ol> </li> <li>III- Ergonomics in transport               <ol style="list-style-type: none"> <li>1. Ergonomics and the Transport Sector</li> <li>2. Professional driving</li> <li>3. Design of systems</li> <li>4. Security</li> </ol> </li> <li>IV- Ergonomics and New Technology               <ol style="list-style-type: none"> <li>1. Work changes by new technologies</li> <li>2. Legislation applicable to the work with display screens</li> <li>3. Relevance of ergonomics on work problems with display screen equipment</li> <li>4. Methods and tools of analysis and risk assessment applied to the context of use of information systems</li> </ol> </li> </ul> |

The lectures are supported by expository methods, supported by slides. All references are provided in each lesson and are available on the web platform. In the practical sessions it is appeal to the technical problem-solving, often supported by video and photographs of work situations that have been subject of ergonomic intervention in previous years, resulting in a positive momentum over the academic years in which UC has been ongoing. The evaluation process has two alternative models: Continuous (one test and practical work) and final (theoretical and practical exams), limiting its continuity to classification > 9.5 values in both theoretical (70%) and practical (30%) in each module. The final classification id obtained by adjusted mean of all modules: 40% - Industrial Ergonomics, 20% in other topics.

## Evaluation

## Bibliography

Bernard, B. (1997) Musculoskeletal disorders and workplace factors. A critical review of epidemiologic evidence for work-related musculoskeletal disorders of the neck, upper extremity, and low back pain. NIOSH, Publ n° 97.141.

Hagberg, C., Silverstein, B., Wells, R., Smith, M. J., Hendrick, H., Carayon, P., & Pêrusse, M. (1995) Work related musculoskeletal disorders (WMSDs): a reference book for prevention. London: Taylor & Francis.

Zwahlen, H.T., Adams, C.C :J. and DeBald, D.P. (1988) Safety aspects of CRT touch panel controls in automobiles, in Gale et al. (eds) - Vision in Vehicles II, Amsterdam : Elsevier,335-344.

Otero, Gestal (1993), "Riesgos del Trabajo del Personal Sanitario", Ed. McGraw-Hill.

Poinsignon, H., Pepin, M., Jorand, Y. & Gallet, A. (1995), "Changer le Travail à L'Hôpital", Ed. ANACT.

ANSHEL, Jeffrey, «Visual Ergonomics in the Workplace», Taylor & Francis, London, 1998

BUDNICK, P. «Fundamentals of Office Ergonomics», An Ergoweb Inc. Publication, 2004