

<b>ID</b>	513
<b>Curricular Unit</b>	Introduction to Ergonomics
<b>Regent</b>	Filipa Catarina V. Silva Pinto Marto Carvalho
<b>Learning Outcomes</b>	<p>The UC Introduction to Ergonomics aims to provide the student an overview of the role of ergonomics science in the actual socio-economic context as well as the understanding of the Ergonomics practice.</p> <p>Learning purposes are:</p> <ul style="list-style-type: none"> <li>- To know the historical evolution of ergonomics and state of the art at the national and international settings;</li> <li>- To understand the needs and importance of ergonomics in the current socio-economic context;</li> <li>- To know framework of the ergonomist in labor systems;</li> <li>- To understand the basic stages of ergonomics practice.</li> </ul>
<b>Syllabus</b>	<ol style="list-style-type: none"> <li>1. Concept of Ergonomics</li> <li>2. Development of Ergonomics <ul style="list-style-type: none"> <li>- Origin and evolution;</li> <li>- The main currents of Ergonomics.</li> </ul> </li> <li>3. Approach to the concept of Ergonomics <ul style="list-style-type: none"> <li>- Ergonomic Concepts various authors and agencies;</li> <li>- Ergonomics: Science Multi, Inter and Trans-disciplinary;</li> <li>- Key Features Ergonomics: Comfort, safety, health, efficiency and reliability.</li> </ul> </li> <li>4. Approach to the concept of Work <ul style="list-style-type: none"> <li>- Work concept;</li> <li>- Man's position in the work organization;</li> <li>- Perspective of ergonomics about work.</li> </ul> </li> <li>5. System Man-Work / Work situation <ul style="list-style-type: none"> <li>- Concept of system;</li> <li>- System components / work situation;</li> <li>- Types of relationships.</li> </ul> </li> <li>6. Ergonomics practice <ul style="list-style-type: none"> <li>- Ergonomic analysis: areas of ergonomic analysis- socio-technical system; Activity; activity results.</li> <li>- Ergonomics intervention: areas of ergonomics intervention; classification of ergonomics from the intervention perspective; subject, context and scale of the intervention;</li> <li>- Examples of application contexts of Ergonomics.</li> </ul> </li> </ol>

## Evaluation

All classes have both practical and theoretical typologies. Initially, in each session is adopted the expository methods, supported by slides; the bibliography is provided in each lesson and made available on the web platform. 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 second part of the class case studies or articles are presented that expose each of the subjects covered in the theoretical component. There are two evaluation models for evaluation process: Continuous and final. The first considers 2 tests and 2 practical work (records, reports, paper reviews); the minimum classification accepted is >9.5 values and it is mandatory the presence to 4/5 classes effectively taught. The final evaluation model consists on a written exam, encompassing theoretical and final component. The oral examination is required regardless of the evaluation model.

## Bibliography

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Dan MacLeod (1995) *The ergonomics edge: improving safety, quality and productivity*, VNR, USA.

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Karwowski, W. (2011) *International Encyclopedia of ergonomics and human factors*, Vol.1, Taylor & Francis.

Laville, A. (1990) *L'ergonomie*, Coleção Que sais-je?, PUF, Paris.

Montmollin, M. (1990) *L'ergonomie*, Editions la Découverte, Paris.

Noulin, M. (1992) *Ergonomie*, Techniplus, France.

Rabardel, P.; Carlin, N.; Chesnais, M.; Lang, N.; Joliff, G.; Pascal, M. (2001) *Ergonomie, concepts et methods*, Editions Octarés, 3<sup>a</sup> ed., Toulouse.