UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
Ergonomics

Academic Year 2024/2025

1. Organic Unit

Faculty of Architecture and Arts

2. Course

DESIGN

3. Cycle

1st

4. Course Unit

Ergonomics (L5008)

5. Scientific Area

6. Curricular Year

1st

7. Type of Curricular Unit / Semester

1st Semester

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8. Class type and workload (work time)

Theoretical classes:	30,00
Practical classes:	
Theoretical-Practical Classes	
Tutorial Guidance:	

9. ECTS Credits

2,00

10. Scientific Area Coordinator

11. Regent

Profª Doutora Arqtª CRISTINA MARIA DOS SANTOS NUNES PIRES CARAMELO GOMES

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

The objective of the course is to understand the human being as a physical/psychic and functional/symbolic being, in his connection with the surroundings, equipment, and elements of space that maintain a constant "dialogue" with him and generate detectable or measurable.
It also intends to value the spatial context of the human figure in its habitat, and consequently the importance of adapting the built environment that characterizes it to the human physical and psychological features.

15. Specific Objectives

Perceiving human dimensional issues in relation to objects, equipment and spaces experienced, promoting dimensional efficiency in adequate response to the challenges of use and functions, promoting the qualification of spaces, as well as the social aspect of their use.
There is a clear need to qualify spaces in general, and work spaces in particular, in view of the importance of the factors that allow or restrict behaviors and social relationships that influence their use.

16. Skills to be acquired

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At the end of the semester, the student should be able to perceive how human beings relate to the built environment:

At the dimensional, anthropometric level

Functionally, and ergonomically.

At the level of perception of the psychological effects of real and virtual environments on human experience.

The acquisition of knowledge through research and constant analysis of the surrounding reality, the definition of strategies for interpretation, understanding, and subsequent action.

17. Teaching Methodology

Classes will address different examples, motivating the capacity for analysis and subsequent debate of the issues presented.

Critical analysis of project solutions and theoretical development presented by research centers specialized in these themes.

Development of practical exercises allowing knowledge of the relationship between theory and practice with the BODY as the main theme. A set of exercises will be produced on the subjects addressed throughout the classes.

18. Course Unit Program

The knowledge of Man and his physical dimensional reality.

The contribution of anthropometry and ergonomics to anthropological knowledge.

Anthropometric analysis concepts.

Ergonomic analysis concepts.

The contribution of ergonomics in project conception in design.

The user as the main actor of space, reach, and posture.

The table and sitting as primordial interfaces of the relationship between the body and the furniture (Rietveld).

User experience and the importance of the concept of usability.

Introduction to cognitive psychology: sensation, perception, attention, and memory.

Gestalt theory applied to design.

19. Assessment Methods

The evaluation will be based on attendance, participation, and commitment in the debates made during the privileged contact by the classroom space, in the execution and presentation of works of application of knowledge.

The assignments requested, as well as the written tests in compliance with the evaluation regulations of Universidade Lusíada, are the subject of a specific statement, following the most appropriate methodology for the objective to be achieved and duly scheduled.

20. Didactic Resources

Referenced bibliographical elements. Existing databases in the Media Library. Computer equipment, HW(PC), and SW (power point) for the presentation of classes and student work.

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21. Sustainability Objectives

Good health and well being
Quality education
Decent work and economic growth
Reduced inequality
Sustainable cities and communities
Climate action
Partnerships to achieve the goal

22. Keywords

Anthropometry
Ergonomics
User experience
Usability
Cognitive psychology

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23. Main Bibliography

Author(s):	TILLMAN, Barry and TILLMAN, Peggy		
Title:	Human Factors and Ergonomics Design Handbook		
Edition:	3ª ed.	Year:	2016
Local:	New York		
Publisher:	McGraw-Hill Education		

Author(s):	DREYFUSS, Henry and TILLEY Alvin R.		
Title:	The Measure of Man and Woman: Human Factors in Design		
Edition:		Year:	2021
Local:	New York		
Publisher:	Whitney Library of Design		

Author(s):	KOPEC, D.		
Title:	Environmental Psychology for Design		
Edition:	2ª	Year:	2012
Local:	New York		
Publisher:	Fairchild Books		

24. Complementary Bibliography

Author(s):	SHORROCK, Steven and WILLIAMS, Claire		
Title:	Human Factors and Ergonomics in Practice: Improving System Performance and Human Well-Being in the R		
Edition:		Year:	2016
Local:	New York		
Publisher:	CRC Press		

Author(s):	GARRETT, Jesse James		
Title:	The Elements of User Experience: User-Centered Design for the Web and Beyond		
Edition:	2ª	Year:	2010
Local:	New York		
Publisher:	New Riders		

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Título / Title	Course Unit Program 'ERGONOMIA': Academic Year 2024/2025
Autor / Author	Profª Doutora Arqtª CRISTINA MARIA DOS SANTOS NUNES PIRES CARAMELO GOMES
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