UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
Ergonomics

Academic Year 2023/2024

1. Organic Unit

Faculty of Architecture and Arts

2. Course

Architecture

3. Cycle

1st

4. Course Unit

Ergonomics (01319)

5. Scientific Area

6. Curricular Year

2nd

7. Type of Curricular Unit / Semester

1st Semester

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8. Class type and workload (work time)

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

9. ECTS Credits

2,00

10. Scientific Area Coordinator

Profª Doutora Arqtª CRISTINA MARIA DOS SANTOS NUNES PIRES CARAMELO GOMES

11. Regent

Prof. Doutor Arq. CARLOS MANUEL LAMPREIA DA SILVA

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

The subject aims to understand Man 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 generates detectable or measurable effects.

It also intends to value the spatial context of the human figure in its habitat, and consequently the crucial importance of conditioning the built space to the physical and psychological characteristics of the human being.

15. Specific Objectives

Perceiving human dimensional issues in relation to objects, equipment, and spaces experienced, promoting dimensional efficiency and 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 workspaces 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 in a position to perceive how man relates to the built environment:
At the dimensional, anthropometric level
Functionally, and ergonomically.
At the level of perception of the psychological effects of built spaces 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 to allow the knowledge of the relationship between theory and practice having as the main theme the interactions between the user and the space.

18. Course Unit Program

The knowledge of Man and his physical dimensional reality:

Historical introduction to the concept of human representation and its cultural context.
The contribution of anthropometry and ergonomics to anthropological knowledge.
The contributions of the Industrial and Digital Revolutions to the emergence of new needs and expectations: Ergonomics and Anthropometry today.
Anthropometric analysis concepts.
Ergonomic analysis concepts.
Notions of human measurement, and representational models.
Statistics applied to human measurement: the creation of tables and percentiles.
The contribution of ergonomics in project design in architecture.
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)
The importance of the User Experience, and the interaction with the real and virtual space.
The knowledge of Man and his psychological dimensional reality:

Perception: Psychology of Space / The Hidden Dimension, Studies in the Psychology of Space.
Perception: housing experience, studies of perception, psychology, and use of space in a housing environment.
The house as a habitable micro-cosmos: experiences of social, historical, constructive and anthropological reflection.

19. Assessment Methods

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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 presentation of classes and student work.

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

Ergonomics
Anthropometry
User experience
Proxemics
Environmental psychology

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23. Main Bibliography

Author(s):	GAVRIEL Salvendy (ed.)		
Title:	Handbook Of Human Factors And Ergonomics		
Edition:	4ª ed.	Year:	2012
Local:	New York		
Publisher:	John Wiley & Sons		

Author(s):	DAY, C.		
Title:	Places of the Soul: Architecture and environmental design as a healing art		
Edition:		Year:	2014
Local:	New York		
Publisher:	Routledge		

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

24. Complementary Bibliography

Author(s):	GALLAGHER, W.		
Title:	The Power of Place: How Our Surroundings Shape Our Thoughts, Emotions, and Actions		
Edition:		Year:	2007
Local:	New York		
Publisher:	Harper Perennial		

Author(s):	KOPEC, D.		
Title:	Health and Well-being for Interior Architecture		
Edition:		Year:	2017
Local:	New York		
Publisher:	Routledge		

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Ficha técnica MIP / MIP Datasheet	
Título / Title	Course Unit Program 'ERGONOMIA': Academic Year 2023/2024
Autor / Author	Profª Doutora Arqtª CRISTINA MARIA DOS SANTOS NUNES PIRES CARAMELO GOMES
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