

 <p>IPG Politécnico da Guarda Escola Superior de Tecnologia e Gestão</p>	GUIA DE FUNCIONAMENTO DA UNIDADE CURRICULAR	MODELO PED.008.02
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<i>Curso</i>	Master's degree in civil constructions			<i>Ano letivo</i>	2021/2022		
<i>Unidade Curricular</i>	Sustainable construction			<i>ECTS</i>	4		
<i>Regime</i>	Compulsory						
<i>Ano</i>	1º	<i>Semestre</i>	2º sem	<i>Horas de trabalho globais</i>			
<i>Docente (s)</i>	Maria de Jesus de Almeida Leão			<i>Total</i>	112	<i>Contacto</i>	45
<i>Coordenador da área disciplinar</i>	Carlos Manuel Gonçalves Rodrigues						

GFUC (Completed SD)

1. LEARNING OBJECTIVES

Provide students with knowledge in the area of sustainability in the evolution of the concept of sustainable construction and application of sustainable principles.

The students should acquire skills in perception and interpretation of the various domains involved in the context of sustainable development, with a company dedicated to the impact of the construction sector, particularly in regards the agents involved, urban expansion and construction approach itself. You should still be able to apply sustainable principles and identify strategies to minimize the impact on all stages of the life cycle of buildings.

2. PROGRAMME

Framing of the issue. Basic notions and concepts; The use of energy and sustainable development. Sustainability indicators; Technological development and sustainability; Political and regulatory environment: general policies; environmental certification; environmental labeling in construction; specific policies of the construction; Sustainable construction; Minimizing consumption of energy, water and materials. Concept of eco-efficiency; Sustainability and Life Cycle Analysis of Structures; Political and regulatory environment: general policies; environmental certification; environmental labeling in construction; specific policies of the construction; Evaluation of sustainability in construction; Systems for assessing sustainability in construction; Impact on the sustainability of the materials of construction (quality interior and exterior environment); Resource management in the context of sustainable construction; Energy resource management.

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

The syllabus enables students to develop skills in sustainability across sectors and mostly in construction . Seeks to give students an overview of the concept of sustainability transversely , political, regulatory and economic environment . The practical work allows the simulation of the evaluation and implementation of sustainability in construction. The definition of work is consistent with the development of skills because it allows students to develop a methodology which apply the various concepts that are covered throughout the semester . In studies, students have to propose alternative solutions , with better performance in order to achieve a sustainable solution .

The evaluation of the course will be conducted through a written (50 %) of theoretical and practical nature , without consultation event , in which students must obtain a minimum grade of 9.5 . Can only attend the review frequency by those who attended more than two thirds of lectured (5 %) . The review is also complemented by a practical group work (45 %) , developing extra class into groups of two students, on topics to propose .

4. MAIN AND BIBLIOGRAPHY

Pinheiro, M. (2006) Ambiente e Construção Sustentável, IA, Amadora.

Tirone, Livia; Nunes, Ken: Construção sustentável- Soluções para uma prosperidade renovável”, 3ª edição, Setembro de 2010, ISBN 978-989-96913-0-8

Farr, D.(2007) Sustainable Urbanism: urban design with nature, Wiley.

LaGro, J. (2008)Site Analysis: A Contextual Approach to Sustainable Land Planning and Site Design, Wiley & Sons, Inc. Hoboken, New Jersey.

Meadows, D.L.; Meadows,D.L.; Behrens, J.R.W., The limit to growth, MIT Press, 1972.

5.TEACHING METHODOLOGIES (INCLUDING EVALUATION)

The methodologies used are student centered and the momentum created in class. In this sense, the subject is exposed, supplementary exercises are proposed to better

understand the concepts given. During classes we intend to motivate students to participate by issuing opinion and submit your questions. This course seeks to stimulate the student's ability to learn and work together, through the preparation of a work and research. The platform of e - learning is used for the provision of material support and the dissemination of activities related to the course.

Assessment is continuous and intends to evaluate the different stages of student learning. In this sense it is a practical work done during the semester.

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The methods used are based on giving students followed the theoretical foundations of small examples of applying the concepts, are proposed complementarily work where students beyond demonstrate knowledge of the subjects they have to develop the ability to research, interpretation and working in groups.

The rating is defined in terms of skills acquired and intended to measure the ability of the student has to develop, write and present a topic and demonstrate that you understand the objectives proposed for the work.

6. ATTENDANCE

Group work and 80% class attendance

7. CONTACTS AND OFFICE HOURS

(jleao@ipg.pt; Gabinete 76)

26 de Junho de 2014

Signature:

Area/Group Coordinator

Professor name