

# SUBJECT DESCRIPTION

Course	Topographic Engineering					
Subject	Computer Aided Topographic Drawing					
Academic year	2023/2024	Curricular year	1st	Study period	2nd semester	
Type of subject	Compulsory	Student workload (H)	Total: 154	Contact: 75	ECTS	5,5
Professor(s)	Doctor António Figueiredo Monteiro					
Area/Group Coordinator Head of Department		Doctor Maria Elisabete Santos Soares				

### PLANNED SUBJECT DESCRIPTION

#### **1. LEARNING OBJECTIVES**

Qualify the students with methods and techniques for execution computer aided design's and representation graphic information. Introduction to graphic information representation.

#### 2. PROGRAMME

- 1. Introduction of computer aided drawing programs.
- 2. Workspace preparation.
- 3. Tools: drawing, edition, aid.

4. Advanced concepts and creation of symbols, creating hatch, using dimensions, grouping objects into blocks, creating line types and modeling 3D.

- 5. Peripheral vector and raster input.
- 6. Introduction to cartographic digitalization.
- 7. Graphic output.

#### 3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

Through its content, this curricular unit contributes to the overall training of the student as a person and as a future professional. For this reason, the contents train and prepare the students, making them aware of the need for graphic representation in the area of engineering, making full use of technology and computer systems specific to technical design. In the end, the student should be able to participate in and carry out his/her activity autonomously using the technology for representing graphic entities of geographic information in computer technology.

#### 4. MAIN BIBLIOGRAPHY

- Neto, P.; " Autocad 2002 ";FCA Editora de Informática.
- Neto, P.; " Autocad 2000 "; FCA Editora de Informática.
- Santos, João, "Curso Avançado de AutoCAD", FCA Editora de Informática



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- Luis, Fernando e Santos, João, "Programação em AutoCAD", FCA Editora de Informática
- Autodesk, "Autocad 14 Users Guide

## 5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

Oral, computer and multimedia show exposition about methods and types of tools of design software. Practice exercise using computer program. Availability by e-learning contents for course.

Test theoretic–application; execution of a practical work whose weight for the final classification should be at least 50%.

## 6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

To reach the proposed objectives, the methodology of the curricular unit is based on principles of theoretical and practical training as well as practice and laboratory training. The pedagogical methods and techniques during the class sessions are theoretical and practical lectures using audiovisual and computer aids with exercises which are solved via specific software as well as assignments in the area of digitalized cartography.

#### 7. ATTENDANCE

Mandatory attendance in class performance and presentation of practical work

#### 8. CONTACTS AND OFFICE HOURS

#### CONTACTS

#### Professor:

Name: António Figueiredo Monteiro Email: <u>amonteiro@ipg.pt</u> Telef: 271 220 111 OFFICE Nº: 78

## Area Coordinator:

Nome: Maria Elisabete Santos Soares Email: esoares@ipg.pt Telef: 271 220 111 OFFICE Nº: 78



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## **OFFICE HOURS**:

- Thursday: 11h to 13h

## 9. OTHERS

### DATE

14 de março de 2024

### SIGNATURES

Professor(s), Area/Group Coordinator or Head of Department signatures

Professor

(signature)

Area/Group Coordinator

(signature)