

<b>POLI</b> ESCOLA SUPERIOR TECNOLOGIA GESTÃO <b>TÉCNICO</b> <b>GUARDA</b>	<b>SUBJECT DESCRIPTION</b>	<b>MODELO</b> PED.013.03
---	----------------------------	-----------------------------

<i>Course</i>	<b>Civil Engineering</b>					
<i>Subject</i>	<b>Applied Hydraulics</b>					
<i>Academic year</i>	2023-2024	<i>Curricular year</i>	3rd	<i>Study period</i>	1st semester	
<i>Type of subject</i>	Compulsory	<i>Student workload (H)</i>	Total: 182	Contact: 75	<i>ECTS</i>	6,5
<i>Professor</i>	Nuno Álvaro Freire de Melo					
<input checked="" type="checkbox"/> <i>Area Coordinator</i> <input type="checkbox"/> <i>Head of Department</i>		José Carlos Costa Almeida				

## PLANNED SUBJECT DESCRIPTION

### 1. LEARNING OBJECTIVES

It is intended that students acquire an adequate preparation, knowledge and understanding necessary to the analysis, design and construction of public urban water supply systems.

### 2. PROGRAMME

- 1 – Review of concepts. Constitution of a water supply system.
- 2 – Basic Elements for the Design of Water Supply and Distribution Systems.
- 3 - National legislative framework.
- 4 – Water Distribution Systems.
- 5 – Reservoirs.
- 6 – Water Supply Systems.
- 7 – Hydraulic transients.

### 3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

This curricular unit, through the syllabus and by teaching methodology, aims contributes to the education of the student as an individual and as future professional, making them aware of the need of knowledge-knowledge, know-being, of know-how to be and know-how to do a design or an analysis of a water supply system.

### 4. MAIN BIBLIOGRAPHY

[1] MOPTC - *Regulamento Geral dos Sistemas Públicos e Prediais de Distribuição de Água e de Drenagem de Águas Residuais*, Decreto Regulamentar n.º 23/95, de 23 de Agosto de 1995), Imprensa Nacional, Lisboa. *Fundamental*

<p>POLI ESCOLA SUPERIOR TECNOLOGIA GESTÃO</p> <p>TÉCNICO GUARDA</p>	<p><b>SUBJECT DESCRIPTION</b></p>	<p><b>MODELO</b> PED.013.03</p>
---	-----------------------------------	-------------------------------------

[2] Sá Marques, J. A. A.; Sousa, J. J. O. (2009, 2ª ed) – *Hidráulica Urbana: Sistemas de Abastecimento de Água e de Drenagem de Águas Residuais*. Edição da Imprensa da Universidade de Coimbra, Coimbra. *Fundamental*

[3] Nemanja Trifunovic (1985, 2ª ed) – *Introduction to Urban Water Distribution*. CRC Press, Taylor & Francis Ltd, London, UK.

[4] U.S. Fire Administration Water Supply Systems and Evaluation Methods (2008) - Volume I: *Water Supply System Concepts* by Harry E. Hickey, New York, USA

## 5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

To achieve the objectives, the proposed methodology in the course is based on principles of theoretical-practice training.

Evaluation will be continuous through active participation in class, the resolution of exercises and in a practical work of a design of one water supply system.

Thus, the weight of the design work for the evaluation will be 30% and the remaining 70% for a written test, consisting of theoretical and practical component.

In any of the assessment components (Work, Theoretical and Practical Assessment Test Assessment Test) the student must obtain a minimum of 25%.

To get approved in the course the student must obtain a minimum of 10 (range 0-20 points).

Ratings above 16 (range 0-20) must be defended in an oral examination.

## 6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

To achieve the objectives, the proposed methodology in the course is based on principles of theoretical- practice training.

The methods and teaching techniques, using affirmative method with technical exhibition and demonstration and with group interaction, with the teacher's responsibility for reinforce learning and coordination, seeking to contribute to the development of personal training and skills acquisition techniques taught in fluid mechanics domains.

## 7. ATTENDANCE

No conditions, but it is very recommended the presence of students in all the classes.

## 8. CONTACTS AND OFFICE HOURS

Nuno Álvaro Freire de Melo  
nuno\_melo@ipg.pt

Horário de Atendimento:  
Wednesday : 14:30H - 15:30H

<p><b>POLI</b>          ESCOLA SUPERIOR          TECNOLOGIA          GESTÃO</p> <p><b>TÉCNICO</b>  <b>GUARDA</b></p>	<p><b>SUBJECT DESCRIPTION</b></p>	<p><b>MODELO</b>          PED.013.03</p>
--	-----------------------------------	--

Tel.: 271220120, Ext.: 1270

Office N.º 70

Wednesday : 18:30H - 19:30H

Thursday : 09:30H - 10:30H

Friday : 14:00H - 15:00H

**DATE**

**23 de outubro de 2023**