



UNIVERSIDADE LUSÍADA  
LISBOA

Course Unit Program  
Technical Infrastructures

Academic Year 2023/2024

**1. Organic Unit**

Faculty of Architecture and Arts

**2. Course**

Architecture

**3. Cycle**

2nd

**4. Course Unit**

Technical Infrastructures (01336)

**5. Scientific Area**

**6. Curricular Year**

4th

**7. Type of Curricular Unit / Semester**

2nd Semester



UNIVERSIDADE LUSÍADA  
LISBOA

#### 8. Class type and workload (work time)

Theoretical classes:

Practical classes:

Theoretical-Practical Classes 60,00

Tutorial Guidance:

#### 9. ECTS Credits

3,50

#### 10. Scientific Area Coordinator

Prof. Doutor Arq. VÍCTOR MANUEL CANEDO NEVES

#### 11. Regent

#### 12. Assistants

Prof. Doutor Arq. LUIS MANUEL PIRES PEREIRA

#### 13. Teaching Language

Portuguese

#### 14. General Objectives

In this curricular unit, the student is led to interpret the general networks of urban infrastructure and relate them to the different projects. Essentially, the general objectives are:

- Understanding the relationship between specialty projects and general infrastructure
- To Know how to apply representation codes related to general infrastructures.
- Introducing new devices and facilities that promote sustainability and response to climate change

#### 15. Specific Objectives

- To know the applicable regulations that condition the application of general infrastructure projects.
- Learning to evaluate the problems of environmental comfort, with the development of specific solutions in the project.

#### 16. Skills to be acquired

- Learning to interpret building execution projects and the coordination of specialties.
- Learning how to execute execution projects with the consequent study and application of drawing representation techniques.

#### 17. Teaching Methodology

This curricular unit comprises theoretical and practical classes. Theoretical classes are given by the coordinator of the curricular unit through audiovisual means. Practical classes are taught by framing practical works and relating them to the project curricular unit.



UNIVERSIDADE LUSÍADA  
LISBOA

## 18. Course Unit Program

### 1-Theoretical classes

- The architecture execution project. Technical representation. Map of finishing Materials
- Legislation applied to general infrastructures and its consequence in the project
- Cartography consultation related to general infrastructures
- Public water supply networks,
- Public sanitation and stormwater drainage networks
- Public electricity networks
- Public telephone and data networks
- Technical spaces in a collective housing building (elevators, waste ducts, pumping)

### 2- Practical classes:

In practical classes, the program focuses on the execution project of a building developed in the curricular unit of Project II, during the 1st semester with the consequent study and application of the following installations and networks:

- Execution project at scales 1:50 and 1:20, with a Map of Finishing materials
- Plan of roofs and drainage of rainwater and its connection to the general urban network
- Basement drain network and its connection to the general urban sewage network

## 19. Assessment Methods

The curricular unit is a semester unit, with two components, one practical and the other theoretical. The evaluation of the curricular unit is carried out on a continuous basis, that is, the student is evaluated by the interest he demonstrates in the subjects taught, his participation in classes, and respective attendance, and through all the work and evaluation instruments carried out throughout the year: sketches, theoretical tests, and practical projects

## 20. Didactic Resources

Slides and Powerpoint  
videos  
Moodle  
UL Material Archive  
Construction site trips

## 21. Sustainability Objectives

The curricular unit aims to contribute to sustainability in the following general areas:

- Promoting the gradual dematerialization of the teaching/learning process.
- Promote and facilitate access to research and clean technologies.
- Recycle, reduce and recover, whenever possible, materials and other consumables
- Promote the recycling of model materials

## 22. Keywords



UNIVERSIDADE LUSÍADA  
LISBOA

Execution  
Finishing Materials  
Infrastructures  
Drainage  
Networks  
installations  
Specialties

### 23. Main Bibliography

Author(s): SILVA, Paulo Brito,,  
Title: Desenho técnico em arquitetura e design  
Edition: Year: 2015  
Local: lisboa  
Publisher: Universidade Lusíada

---

Author(s): Allen, Edward  
Title: Como funciona un edificio principios elementales  
Edition: Year: 1987  
Local: Barcelona  
Publisher: Gustavo Gili

---

Author(s): Lopes, Carlos Nuno Lacerda  
Title: Construção 2  
Edition: Year: 2015  
Local: Porto  
Publisher: Centro de Inovação em Arquitectura e Modos de Habitar FAUP

---

### 24. Complementary Bibliography

Author(s): Autor(es): PINTO, Alberto Reaes, e outros  
Title: Contribuições para a construção sustentável  
Edition: Year:  
Local: Lisboa  
Publisher: Universidade Lusíada Editora,

---

Author(s): Conselho Arquitectos Europa  
Title: A Green Vitruvius, princípios e práticas de projecto para uma arquitectura sustentável  
Edition: Year:  
Local: Lisboa  
Publisher: Ordem dos Arquitectos

---



UNIVERSIDADE LUSÍADA  
LISBOA

| Ficha técnica MIP / MIP Datasheet |                                                                         |
|-----------------------------------|-------------------------------------------------------------------------|
| Título / Title                    | Course Unit Program 'INFRAESTRUTURAS TÉCNICAS': Academic Year 2023/2024 |
| Autor / Author                    | Prof. Doutor Arq. VÍCTOR MANUEL CANEDO NEVES                            |
| Classificação / Classification    | -                                                                       |
| Descritores / Descriptors         | -                                                                       |
| Colaborador(es) / Colaborator(s)  | -                                                                       |
| Data Hora / Date Time             |                                                                         |
| Formato de dados / Data Format    | Texto / Text, PDF                                                       |
| Estatuto de utilização / Usage    | Acesso público / Public Access                                          |
| Relação / Relation                | Version 1,0                                                             |
| (c) Universidade Lusíada, 2024    |                                                                         |