

Course Unit	Urban Forestry			Field of study	Silviculture and Wildlife Management	
Master in	Management of Forest Resources			School	School of Agriculture	
Academic Year	2022/2023	Year of study	1	Level	2-1	ECTS credits 6.0
Туре	Semestral	Semester	2	Code	6363-352-1201-00-22	
Workload (hours)	162	Contact hours	T 30 TP T - Lectures; TP - Lectures a	- PL 30 T	C - S - solving, project or laboratory; TC -	E - OT 20 O - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s)

José Paulo Mendes Guerra Marques Cortez

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

- Understand the environmental importance and needs of trees in urban spaces
  Recognize stress, disease or other issues on urban trees and consequences to public health
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- Apply forestry techniques in urban forests and determine tree values
  Apply inventory and silviculture techniques in urban forests
  Adapt silviculture techniques to urban and humanized areas
  Planning basis for green areas management an urban context. 5
- 6.

# Prerequisites

Before the course unit the learner is expected to be able to: Basic knowledge on botany and forestry

## Course contents

Identification and ecology of trees for urban use. Prunning techniques for ornamental trees. Stress and disease problems of trees in urban areas. Physiological basis and plant production for ornamental purposes. Soil and climate importance for urban trees. Ecological structure and green plans. Urban green spaces management and public welfare

## Course contents (extended version)

- 1. URBAN FORESTS
- Concepts in urban forests
  Historical evolution of urban trees and urban environments
  VALUES AND NEEDS OF URBAN SOCIETIES
- Ecological values
  Urban trees and animals: ecosystem approach
  IMPORTANCE AND EFFECTS OF URBAN TREES
- Environmental effects Social effects

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- Social ellevis
   VRBAN SILVICULTURE
   Species and tree selection. Physiology and propagation in ornamental species
- Planting and tree growth guiding
  Tree maintenance
- 5. INVENTORY AND TREE VALUES Gardens and urban parks

  - Street trees How to calculate tree values
- 6. PLANNING BASIS FOR URRBAN FORESTRY Public use
- Urban tree planning 7. GREEN SPACES MANAGEMENT
- Urban green structure
  Recreation and protection areas
- Damages and public health
- 8. Practices
- Tree prunning in urban spaces
  Tree measuring, urban tree recording and inventory data bases
  Preparation of a green area afforestation plan

#### Recommended reading

- Miller, RW 1997. Urban Forestry: Planning and Managing Urban Greenspaces. 2nd Ed. Prentice Hall
  Palomo, PJS 2003. La Planificacion Verde en las Ciudades. Ed. Gustavo Gili
  Michau, E (1998). Manual Fapas A poda das árvores ornamentais. Gráfica Claret
  Cox, S 2012. Urban Trees: A Practical Management Guide. Crowood Press

- 5. Roloff, A. (ed.) (2016) Urban Tree Management. Wiley Blackwell.

#### Teaching and learning methods

Lecture sessions with multimedia support, tutorial classes and practice based on group works on field and lab, using software and scientific documents

### Assessment methods

- Alternative 1 (Regular, Student Worker) (Final)

   Final Written Exam 70% (Theoretical (50%) and practice (20%))
   Practical Work 30% (Tree measurement and pruning)

  Alternative 2 (Regular, Student Worker) (Supplementary)
  Alternative 3 (Student Worker) (Special)

Language of instruction	
1. English 2. Portuguese	

Electronic validation			
José Paulo Mendes Guerra Marques Cortez	José Manuel Correia Santos Ferreira Castro	Felícia Maria Silva Fonseca	Maria Sameiro Ferreira Patrício
21-12-2022	21-12-2022	21-12-2022	21-12-2022