

Academic year 2023-2024

U LISBOA

UNIVERSIDADE
DE LISBOA



INSTITUTO
SUPERIOR DE
AGRONOMIA

Introdução aos Espaços Arborizados Urbanos

INTRODUCTION TO
ARBORICULTURE AND URBAN
FORESTRY

Ana Paula Ramos, pramos@isa.ulisboa.pt

Introdução aos Espaços

Arborizados Urbanos

PROGRAMA
/ Syllabus

- **Módulo 1/Module 1:**

- Arboricultura e silvicultura urbana: objecto, conceitos e métodos

Arboriculture and urban silviculture: aim, concepts and principles

- A árvore na cidade: como, onde e para quê

Trees in town: how, where and what for

- Limitações do espaço urbano ao crescimento e à sanidade das árvores e núcleos arbóreos

Limitations of urban environment to tree development

- Estrutura arbórea e desenvolvimento das árvores

Tree structure and development

- **Módulo 2/Module 2:**

- Critérios de selecção de espécies para arborização em meio urbano

Selection of tree species for use in urban environments

- Critérios de avaliação da qualidade das plantas e selecção de exemplares para plantação

Criteria for the evaluation of tree seedling quality & tree selection for urban planting

- Produção de plantas e transplantação

Tree seedling production and establishment



INTRODUCTION TO ARBORICULTURE AND URBAN FORESTRY

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- **Módulo 3/Module 3:**

- Instalação e condução de árvores em ambiente urbano

Urban tree installation and management

- Instrumentos de gestão das árvores e urbanas

Tools for urban tree management

- As podas e a condução e requalificação de árvores ornamentais

Pruning as an ornamental tree management and requalification tool

- **Módulo 4/Module 4:**

- Doenças e pragas das árvores urbanas

Urban tree diseases and insect pests

- Avaliação visual do risco (Visual Tree Assessment, VTA)

Visual Tree Assessment (VTA)

- Diagnóstico de doenças e pragas e avaliação da estabilidade mecânica das árvores

Tree pest and disease identification and tree stability evaluation



Material pedagógico de apoio ao estudo

References to support the study

Página da UC/ URL: <https://fenix.isa.ulisboa.pt/courses/ieaurb-0-283463546571032>

Ficheiros PDF com as aulas /
Lecture materials will be available at the web page of the course

- Cox, S. 2011. Urban Trees: A Practical Management Guide. The Crowood Press Ltd
- Ferrini, F., Konijnendijk van den Bosch, C.C., Fini, A. 2019. Routledge Handbook of Urban Forestry. Routledge.
- Gilman, E.F. 2012. An Illustrated Guide to Pruning. 3rd edition. Delmar, Cengage Learning.
- Harris, R.H., Clark, J.R., Matheny, N. P. 2004. Arboriculture: Integrated Management of Landscape Trees, Shrubs and Vines. 4th Edition. Prentice-Hall. Upper Saddle River (New Jersey, USA).
- Roloff, A. 2016. Urban Tree Management for the Sustainable Development of Green Cities. Wiley Blackwell.
- Shigo, A. 2008. Modern Arboriculture. Shigo and Trees Associates.

Michau, E. 1998. *A Poda das Árvores Ornamentais. Manual FAPAS*. Fundo para a Protecção dos Animais Selvagens / Câmara Municipal do Porto. Porto.

Artigos de referência na área /Scientific articles

Calendar (provisional)

Class n.	DAY	HOOR	ROOM	Subject	Professor
1	2024-02-19 (Monday)	08:45:00 - 10:45:00	PF2.12	Presentation of the course. Course objectives and syllabus. Course Grading and Requirements	APR
2	2024-02-20 (Tuesday)	11:00:00 - 14:00:00	sala 24	Mod. 1 - Arboriculture and urban silviculture: aim, concepts and principles Urban trees: importance, benefits and drawbacks	APR
3	2024-02-26 (Monday)	08:45:00 - 10:45:00	PF2.12	Green Infrastructures and Urban trees: benefits and importance (conclusion)	APR
4	2024-02-27 (Tuesday)	11:00:00 - 14:00:00	sala 24	Urban trees: Limitations of urban environment to tree development.	APR
5	2024-03-04 (Monday)	08:45:00 - 10:45:00	PF2.12	Mod. 2 - Tree species selection versus site selection; range of species and genotypes versus climate change.	APR
6	2024-03-05 (Tuesday)	11:00:00 - 14:00:00	sala 24	Nursery production and establishment	APR
7	2024-03-11 (Monday)	08:45:00 - 10:45:00	PF2.12	Criteria for the evaluation of tree seedling quality and tree selection for urban planting	APR
8	2024-03-12 (Tuesday)	11:00:00 - 14:00:00	sala 24	Tree planting, transplantation	APR
9	2024-03-18 (Monday)	08:45:00 - 10:45:00	PF2.12	<i>Field Class- @Commercial Nursery</i>	APR
10	2024-03-19 (Tuesday)	11:00:00 - 14:00:00	sala 24	<i>Field Class- @Commercial Nursery</i>	APR
11	2024-03-25 (Monday)	08:45:00 - 10:45:00	PF2.12	Green walls and green roofs	Teresa Paço
12	2024-03-26 (Tuesday)	11:00:00 - 14:00:00	sala 24	<i>Field Class @Tapada da Ajuda</i>	Teresa Paço
	2024-04-01 (Monday)	08:45:00 - 10:45:00	PF2.12	Easter holidays	
	2024-04-02 (Tuesday)	11:00:00 - 14:00:00	sala 24	Easter holidays	
13	2024-04-08 (Monday)	08:45:00 - 10:45:00	PF2.12	Mod. 3 - Tree structure and development.	APR
14	2024-04-09 (Tuesday)	11:00:00 - 14:00:00	sala 24	Tree pruning; methods and demands.	APR
	2024-04-15 (Monday)	08:45:00 - 10:45:00	PF2.12	School break	
	2024-04-16 (Tuesday)	11:00:00 - 14:00:00	sala 24	School break	
15	2024-04-22 (Monday)	08:45:00 - 10:45:00	PF2.12	Tree pruning; methods and demands.	APR
16	2024-04-23 (Tuesday)	11:00:00 - 14:00:00	sala 24	Tree pruning - the importance of training young trees	APR & invited
17	2024-04-29 (Monday)	08:45:00 - 10:45:00	PF2.12	Urban trees and carbon sequestration - a case study at Sintra	Paula Soares
18	2024-04-30 (Tuesday)	11:00:00 - 14:00:00	sala 24	<i>Field Class @Lisboa LifeLungs Project</i>	
19	2024-05-06 (Monday)	08:45:00 - 10:45:00	PF2.12	<i>Field Class @Lisboa LifeLungs Project</i>	
20	2024-05-07 (Tuesday)	11:00:00 - 14:00:00	sala 24	Urban trees and carbon sequestration - case studies	Paula Soares
21	2024-05-13 (Monday)	08:45:00 - 10:45:00	PF2.12	Green Infrastructures, management and Governance	APR
22	2024-05-14 (Tuesday)	11:00:00 - 14:00:00	sala 24	Mod. 4 - Integrated Pest management in urban green infrastructures	APR
23	2024-05-20 (Monday)	08:45:00 - 10:45:00	PF2.12	Integrated Pest management in urban green infrastructures	APR & invited
24	2024-05-21 (Tuesday)	11:00:00 - 14:00:00	sala 24	Mod. 4 - Vitality Assessment and tree architecture - Field Class @Tapada da Ajuda	APR
25	2024-05-27 (Monday)	08:45:00 - 10:45:00	PF2.12	Mod. 4 - Body language of trees and VTA - Field Class @Tapada da Ajuda	APR & invited
26	2024-05-28 (Tuesday)	11:00:00 - 14:00:00	sala 24	Risk management and risk mitigation- Field Class @Tapada da Ajuda	APR & invited
27	2024-06-03 (Monday)	08:45:00 - 10:45:00	PF2.12	The future of the Arborist Profession – international certifications and associations	APR & invited
28	2024-06-04 (Tuesday)	11:00:00 - 14:00:00	sala 24	ORAL Presentations-Final work	APR

Introdução aos Espaços Arborizados Urbanos

Avaliação
/ **Evaluation**



(1) Avaliação contínua através da realização de tarefas + Testes (trabalhos de síntese ou análise de casos)

No total serão atribuídas 5 Tarefas + 2 Testes

Trabalhos = 55% Testes = 45% (nota mínima 9,50 valores)

A Nota Final deverá ser superior a 10,00 valores.

*Continuous assessment by accomplishing **tasks** (synthesis works or case analysis) +
WRITTEN TESTS.*

In total 5 Tasks will be assigned + 2 Written Tests

TASKS = 55% WRITTEN TEST = 45% (minimum grade 9.50 values)

The final grade must be greater than 10.00 values.

(2) Por exame final (2 datas)

By a last-chance Final Exam (2 opportunities)

IAUF / IEAU 2024

EVALUATION

Module 1

Module 2

Module 3

Module 4



3 Tasks



1 Task



1 Test



1 Task + 1 Test

Let's start!



How do [urban] trees function ?

What's wrong with this image ?

