UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
Programming Engineering

Academic Year 2023/2024

1. Organic Unit

Faculty of Business and Economic Sciences

2. Course

Computer Engineering

3. Cycle

1st

4. Course Unit

Programming Engineering (L9031)

5. Scientific Area

6. Curricular Year

3rd

7. Type of Curricular Unit / Semester

2nd Semester

FUNDAÇÃO MINERVA CULTURA - ENSINO E INVESTIGAÇÃO CIENTÍFICA

Rua da Junqueira, 188 a 198 - 1349-001 LISBOA - Telefone 213 611 500 - Fax 213 638 307 - e-mail: info@lis.ulusiada.pt - https://www.lis.ulusiada.pt

8. Class type and workload (work time)

Theoretical classes:	
Practical classes:	
Theoretical-Practical Classes	30,00
Tutorial Guidance:	20,00

9. ECTS Credits

6,00

10. Scientific Area Coordinator

11. Regent

Prof. Doutor PAULO JORGE GONÇALVES PINTO

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

With the growing complexity of software systems and the consequent preponderance of costs related to them compared to other ICT components, Software Engineering, in the mid-70s, acquired an increasingly significant importance as a way of guaranteeing greater systematization and control effort to develop new systems, as well as the maintenance of existing systems.

15. Specific Objectives

This course will address the most current techniques with regard to software development project management processes, using project management through the PERT/CPM methodology, multicriteria decision and function point analysis.

16. Skills to be acquired

Students should be able to: specify requirements, design and test complex software systems, using planning tools and management of available resources and manage a software project.

17. Teaching Methodology

Teaching will be based on the oral transmission of information related to the topics under study, followed by the resolution of appropriate exercises for the problems under study, supported by computational simulators.

FUNDAÇÃO MINERVA CULTURA - ENSINO E INVESTIGAÇÃO CIENTÍFICA

Rua da Junqueira, 188 a 198 - 1349-001 LISBOA - Telefone 213 611 500 - Fax 213 638 307 - e-mail: info@lis.ulusiada.pt - https://www.lis.ulusiada.pt

18. Course Unit Program

01. Introduction
02. Project management: PERT/CPM
03. Optimization of the projects created (reduction of costs and duration)
04. Multicriteria decision processes: TOPSIS method of multicriteria decision
05. Function point analysis method for determining the complexity of software development.

19. Assessment Methods

The continuous assessment methodology is expressed in the General Regulation for Continuous Assessment in force.

20. Didactic Resources

Microsoft Project

21. Sustainability Objectives

4. Quality Education
5. Gender Equality
9. Industry, Innovation and Infrastructure

22. Keywords

Software Engineering
PERT
CPM
Function point analysis
Multicriteria decision

FUNDAÇÃO MINERVA CULTURA - ENSINO E INVESTIGAÇÃO CIENTÍFICA

Rua da Junqueira, 188 a 198 - 1349-001 LISBOA - Telefone 213 611 500 - Fax 213 638 307 - e-mail: info@lis.ulusiada.pt - https://www.lis.ulusiada.pt

23. Main Bibliography

Author(s):	Ian Sommerville		
Title:	Software Engineering		
Edition:	10ª	Year:	2015
Local:	Scotland		
Publisher:	Addison-Wesley		

Author(s):	Carlo Ghezzi, Mehdi Jazayeri, Dino Mandrioli		
Title:	Fundamentals of Software Engineering		
Edition:	2ª	Year:	2009
Local:			
Publisher:	Prentice Hall		

Author(s):	António Miguel		
Title:	Gestão de Projectos de Software		
Edition:	5ª	Year:	2015
Local:	Lisboa		
Publisher:	FCA		

24. Complementary Bibliography

Author(s):	Howard Podeswa		
Title:	UML For The IT Business Analyst		
Edition:	2ª	Year:	2009
Local:			
Publisher:	Course Technology PTR		

Author(s):	David L. Olson		
Title:	Information Systems Project Management		
Edition:		Year:	2014
Local:			
Publisher:	Business Expert Press		

FUNDAÇÃO MINERVA CULTURA - ENSINO E INVESTIGAÇÃO CIENTÍFICA

Rua da Junqueira, 188 a 198 - 1349-001 LISBOA - Telefone 213 611 500 - Fax 213 638 307 - e-mail: info@lis.ulusiada.pt - https://www.lis.ulusiada.pt

UNIVERSIDADE LUSÍADA
LISBOA

Ficha técnica MIP / MIP Datasheet	
Título / Title	Course Unit Program 'ENGENHARIA DA PROGRAMAÇÃO': Academic Year 2023/2024
Autor / Author	Prof. Doutor PAULO JORGE GONÇALVES PINTO
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

FUNDAÇÃO MINERVA CULTURA - ENSINO E INVESTIGAÇÃO CIENTÍFICA

Rua da Junqueira, 188 a 198 - 1349-001 LISBOA - Telefone 213 611 500 - Fax 213 638 307 - e-mail: info@lis.ulusiada.pt - https://www.lis.ulusiada.pt