

## FICHA DE UNIDADE CURRICULAR / CURRICULAR UNIT

Ano letivo / Academic year 2023/24 Curso / Course

Código/ Code	Área Científica/ Scientific Area	ECTS	Obrigatória / Optativa Mandatory / Optional	Semestre/ Semester	Ano Curricular/ Curricular year
		3	Optional	2	

### Designação da unidade curricular / Curricular Unit

INTRODUÇÃO AO ANDROID / INTRODUCTION TO ANDROID

### Distribuição de Horas de Contacto por tipo de Ensino / Distribution of Contact Hours by typology of education

Total	Teórico / Theoretical	Teórico/Prático Theoretical / practical	Prático e Laboratorial / Practical and Laboratory	Trabalho de campo / Field work	Seminário / Seminar	Orientação Tutorial / Tutorial	Estágio / Traineeship
30	0	30	0	0	0	0	0
<b>Docente responsável e respetiva carga letiva na Unidade Curricular (preencher o nome completo) / Responsible teaching staff member and lecturing load in the curricular unit (fill in the full name)</b>					<b>Correio eletrónico / Email</b>		
Jorge Guerra Teixeira Constantino					jorge.constantino@esg.ipsantarem.pt		
<b>Outros docentes e respetivas cargas lectivas na unidade curricular / Other Teaching staff and lecturing load in the curricular unit</b>					<b>Correio eletrónico / Email</b>		
Mário Alexandre Martins Duarte					mario.duarte@esg.ipsantarem.pt		

### **Objetivos de Aprendizagem (conhecimento, aptidões e competências a desenvolver pelos estudantes)**

The approved student is expected to

1. Have a notion of the main available ecosystems and publishing platforms for mobile apps;
2. Know how to install and use a development environment for the selected platform;
3. Understand the basics of the chosen platform, regarding its architecture, user interface, overall user experience and data record;

### **Conteúdos programáticos**

- A. An overview of app-ecosystems and app-platforms
  - Perspectives (provider, user, developer)
- B. Picking a platform
  - Introduction to the platform
  - Development environments
  - Setting up the development environment
- C. Application basics
  - Architecture
  - Manifest(s)
  - Resources
  - Programming
- D. User interface essentials
  - Building blocks
  - Layouts
  - Organizations and communication across layouts
- E. Functioning essentials
  - User preferences
  - Data, files and folders, data persistence
  - Permissions
  - Design, considering performance and security guidelines

### **Demonstração da Coerência dos Conteúdos Programáticos com os Objetivos de Aprendizagem da Unidade Curricular**

The topics allow the student to walk a path that starts by presenting the most established mobile apps platforms, from the perspectives of the provider, end-user and developer.

Once a platform is chosen, an adequate software development environment will be decided. Its installation will be done, including enabling the support for hardware accelerated device emulation, if available.

The hands-on development is expected to confer skills which empower the student to create his/her own solutions for the elected platform, using the selected technologies. Before and during the hands-on creation of mobile apps, a range of architectural, design and user interface will be discussed.

#### **Metodologia de Ensino (Avaliação incluída)**

Presentations, examples and case studies.

Hands-on development with the selected solutions.

Assessment:

1. Written test (T)
2. Small projects (P)

$$\text{Final grade} = 0.6 * T + 0.4 * P$$

#### **Demonstração da Coerência das Metodologias de Ensino com os Objetivos de Aprendizagem da Unidade Curricular**

The presentations, examples and the case studies introduce, illustrate and then render the concepts concrete, respectively, helping in their understanding.

The hands-on development using the adopted solutions should translate to "mobile apps" software creation skills.

#### **Bibliografia de consulta /existência obrigatória / Bibliography (Mandatory resources):**

- Murphy, M. (2019). The Busy Coder's Guide to Android Development: <https://commonsware.com/Android/>.
- Android Developers - Training. (2022). from <https://developer.android.com/training/index.html>
- Bill Phillips, C. S., Brian Hardy. (2017). Android Programming: The Big Nerd Ranch Guide (3rd edition (30 January 2017) ed.): Big Nerd Ranch Guides.
- [Joseph Anuzzi Jr., L. D., Shane Conder. \(2015\). Introduction to Android Application Development: Addison Wesley.](#)