

Introduction to Digital Systems

Course Presentation

2024/2025

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Introduction to Digital Systems

- Scientific area
 - Architecture of computing systems
- Courses
 - Computer and Informatics Engineering, Electrical and Computer Engineering, Industrial Automation Engineering
- Contact hours
 - 2h lectures + 2h labs
- ECTS credits
 - 6
- Code
 - 40332

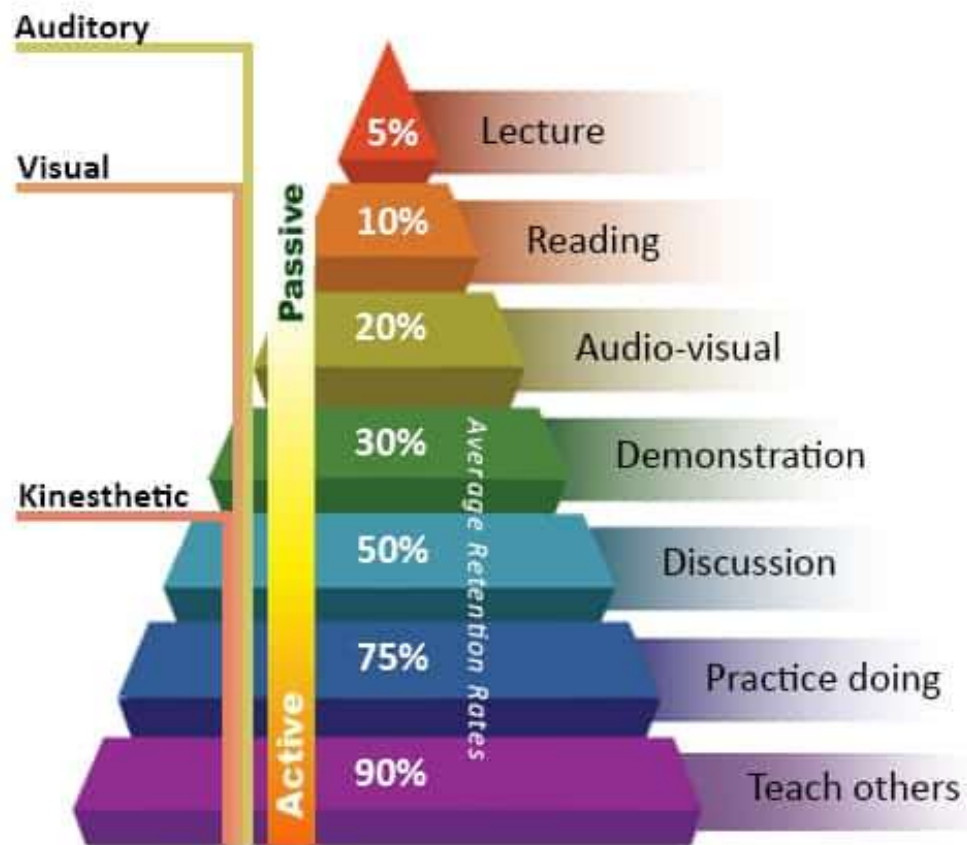
The number of ECTS credits assigned to a course **does not indicate how many hours of classes you will have**. Instead, it **indicates the expected number of hours to study**.

1 ECTS = 25-30 hours of study. 6 ECTS = 150-180 hours of study.

The semester has ~ 15 weeks => you must study at least **10 hours per week**.

These hours include: lectures, labs, book reading, exercise solving, exam study, etc.

Learning Pyramid



Adapted from the NTL Institute of Applied Behavioral Science Learning Pyramid

Kahoot!



Image source: <https://www.educationcorner.com/the-learning-pyramid.html>



Universidade
de Aveiro

Assessment

- Final classification is obtained from two mutually exclusive alternatives:
 - **Continuous assessment** (default) during the TP and lab classes (a personal laptop computer with simulation software is required):
 - 3 TP tests (20%, 20%, 20%) + 2 simulation problems (15%, 15%) + active participation in TP classes (10%)
 - **Final exam**: TP test + simulation problems
- The assessment method is **continuous** by default but might be altered to **final** during the first two weeks of the semester
- For approval, the total weighted average must be ≥ 9.5
- No minimal grades on assessment components

Repeaters

- Positive grades obtained in the various assessment components in the academic year 2023/2024 are not maintained.

Student Absences

- Attendance at lectures is strongly encouraged, but is not considered compulsory. There will be **no record of absences in TP classes**. Student presence might be registered informally.
- In ordinary regime, the **practical classes are of compulsory attendance**.
- In accordance with the current study regulations, all students who, not having a working student status, inexcusably miss **more than 20% of practical classes**, will be **reproved** automatically and will not be allowed to participate in subsequent evaluations during the current academic year.
- The proper documentation of the illness, injury, or other reason must be submitted to DETI secretariat within the stated deadlines. In parallel, and as early as possible, the student should send a copy of the justification to the respective teacher.

Working Students

- Working students who have not been able to attend regular classes during the semester, will have their final exam(s) during the exam season, in January.

Teachers

- Leader:
 - Iouliia Skliarova
- Lectures:
 - Augusto Silva, Iouliia Skliarova
- Labs:
 - Adão Silva, António Navarro, Augusto Silva, Fábio Coutinho, José Luis Cura, Manuel Violas

Student Consultation

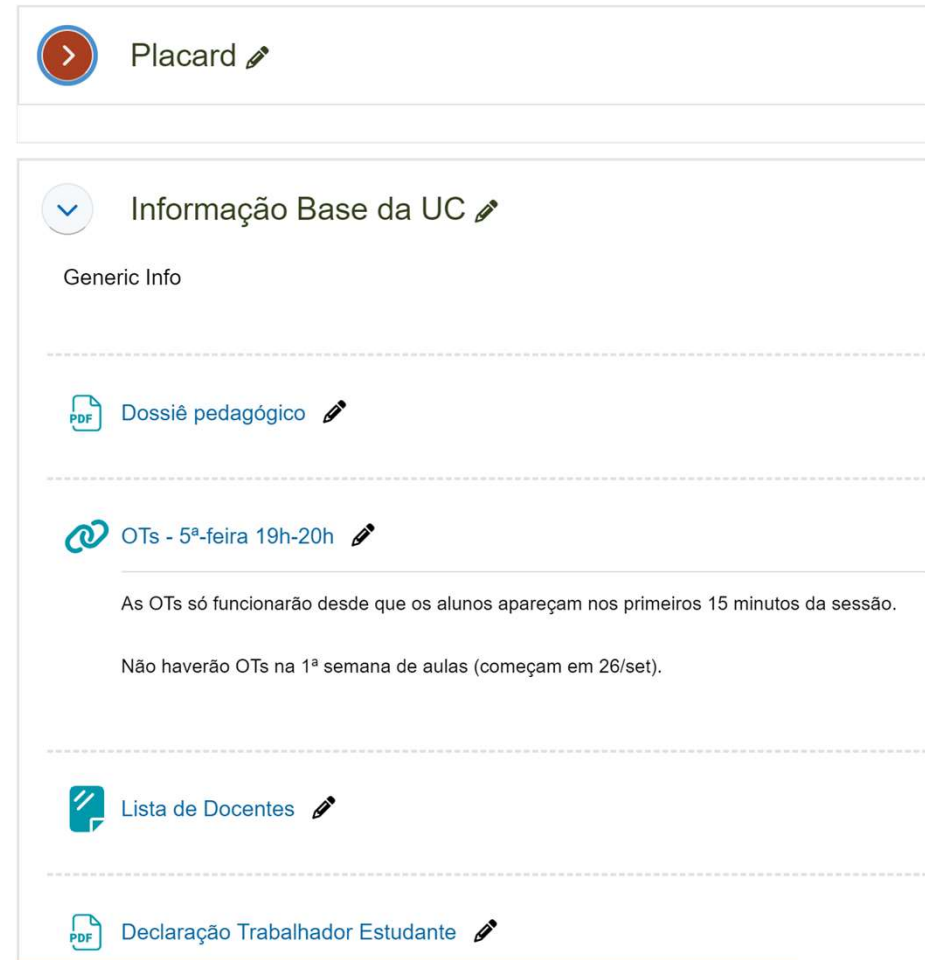
- Mode: distance learning (*zoom*)
- Students are strongly invited to contact their practical class teachers for explanations or other support for self study.

Bibliography

- J.F. Wakerly, *Digital design: Principles and Practices*, 4th ed, Prentice-Hall, 2006 / 5th edition, Pearson, 2018
- J. Deschamps, E. Valderrama, L. Téres, *Digital Systems, from Logic Gates to Processors*, Springer, 2017
- M. Mano, M. Ciletti, *Digital Design*, 4th ed, Prentice-Hall, 2006
- T. Floyd, *Sistemas Digitais: fundamentos e aplicações*, 9^a edição, Bookman, 2007
- A. Amaral, *Eletrónica Digital, Fundamentos e Projeto*, Edições Sílabo, 2019
- M. Dias, *Sistemas Digitais, Princípios e Prática*, 3^a ed, FCA, 2013

Course website: elearning.ua.pt

- Objectives
- Support materials for theoretical classes
- Lab guides
- Teachers' contacts
- Course software
- Assessment
- Bibliography
- Etc.



The screenshot shows a user interface for a course website. At the top, there is a red circular icon with a white right-pointing arrow and the text 'Placard' followed by a pencil icon. Below this is a section titled 'Informação Base da UC' with a blue downward-pointing arrow icon and a pencil icon. Underneath this title is the text 'Generic Info'. The interface is divided into sections by horizontal dashed lines. The first section contains a PDF icon, the text 'Dossiê pedagógico', and a pencil icon. The second section contains a blue chain-link icon, the text 'OTs - 5ª-feira 19h-20h', and a pencil icon. Below this, there is a paragraph of text: 'As OTs só funcionarão desde que os alunos apareçam nos primeiros 15 minutos da sessão.' followed by another paragraph: 'Não haverão OTs na 1ª semana de aulas (começam em 26/set)'. The third section contains a blue notepad icon, the text 'Lista de Docentes', and a pencil icon. The fourth section contains a PDF icon, the text 'Declaração Trabalhador Estudante', and a pencil icon.

Full reading of the teaching dossier is mandatory!

Welcome to the world of digital design!

Have good time studying!

Remember:

6 ECTS = 4h of classes + 6h of homework

Test 1

Get ready to join

Join at **www.kahoot.it**
or with the **Kahoot! app**

Loading Game PIN

