ARQCP: Schedule

Week mapping

Week	Dates	Week	Dates
1	15/09 – 21/09/2025	9	10/11 – 16/11/2025
2	22/09 – 28/09/2025	10	17/11 – 23/11/2025
3	29/09 – 05/10/2025	11	24/11 – 30/11/2025
4	06/10 – 12/10/2025	12	01/12 – 07/12/2025
5	13/10 – 19/10/2025	13	08/12 – 14/12/2025
6	20/10 – 26/10/2025	14	15/12 – 21/12/2025
7	27/10 – 02/11/2025	15	05/01 – 11/01/2026
8	03/11 – 09/11/2025		

- Public holidays:
  - 01/12/2025 (Restauração da Independência), Monday;
  - 08/12/2025 (Dia da Imaculada Conceição), Monday;
- Christmas holiday: 21/12/2025 – 04/01/2026

Planning

Week nr	T	TP	PL	Assessment
1	Course overview. Computer System.	Introduction to the C Programming Language.	Module 0: Introduction to C pro- gramming. Modules and Makefiles	
2	Representing Data.	Pointers in C.		
3	Data in Memory.	Introduction to Assembly.	Module 1: C Programming.	
4	Machine-Level Programming: Basics.	Assembly : Arithmetic operations		
5	Machine-Level Programming:RISC-V.	Assembly : Controlling Execution Flow	Module 2: Introduction to Assembly Programming. Building programs with Assembly and C functions	
6	Machine-Level Programming: Instructions.	Assembly : Accessing Memory		
7	Machine-Level Programming: Addressing modes and Arrays.	Assembly : Stack and Procedure Calls	Module 3: Arrays, strings and functions in Assembly. Integrating project.	M1 – Individual assessment exercise (High-level language)
8	Machine-Level Programming: Functions.	Assembly : Stack and Functions - Parameters and Local Variables		
9	Machine-Level Programming: Compound data types	C and Assembly : Bit-level Operations	Module 4: Functions with Parameters and Local Variables in Assembly Bitwise Operations in C and Assembly Integrating project.	M2 – Individual assessment exercise (Low-level language)
10	Memory hierarchy.	Heterogeneous Data Structures		
11	Dynamic Memory Allocation and Program Optimization.	Dynamic Memory Allocation	Module 5: Heterogeneous Data Structures and Dynamic Memory in C and Assembly. Integrating project.	M3 – Integrating project (Phase 1), LAPR3 Sprint 2
12	No	Dynamic Memory Allocation		
13	No	No	Integrating project	
14	No	No	Integrating project	
15	No	No	Integrating project	M4 – Integrating project (Phase 2), LAPR3 Sprint 3

Assessment

- **M1** – Individual assessment exercise (High-level language):
  - A programming problem to be solved individually by the student during one of the lab classes in week 5.
  - All the topics discussed in lab classes until that point can be assessed in M1, but it should focus on the topics of Module 0 and Module 1.
  - The expected duration is 1h 30m.
- **M2** – Individual assessment exercise (Low-level language):
  - A programming problem to be solved individually by the student during one of the lab classes in week 9.
  - All the topics discussed in lab classes until that point can be assessed in M2, but it should focus on the topics of Module 2 and Module 3.
  - The expected duration is 1h 30m.
- M1 and M2 are graded in the interval [0,20]
- **M3** and **M4** grades are computed as follows:
  - **M*x* = IMPL** * **Factor**;
- **IMPL**, project implementations (present into group repository)
  - Refers to the amount of Use Cases (UCs) implemented
  - UC implementations quality
  - The system is working?
  - Errors, warnings and etc.
  - **Graded in the interval [0,20]**;
- **Factor**, refers to the discussion with each group member (**individually**)
  - Infer (evaluate) the student's knowledge
  - The amount of work.
  - **Graded in the interval [0,100%]**;
  - Some questions could be:
    - Could you explain this functionality?
    - Why are you using this approach?
    - ...
- M3 and M4 are graded in the interval [0,20]