

<b>COURSE: Computer Architecture</b>		
<b>DEGREE: Bachelor in Computer Science and Engineering</b>	<b>YEAR: 3</b>	<b>TERM: 1</b>

WEEKLY PLANNING								
WEEK	SESSION	DESCRIPTION	TEACHING (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	WEEKLY PROGRAMMING FOR STUDENT		
			L E C T U R E S	S E M I N A R S		DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 6,5h)
1	1	Introduction and fundamentals of computer design	X			Personal study and information search	1,66	6,5
	2	Introduction to the C++ programming language		X		Familiarization with using C++ language	1,66	
2	3	Architecture classification and performance evaluation	X			Personal study and information search	1,66	6,5
	4	Exercises on performance		X		Problem solving	1,66	
3	5	Instruction Level Parallelism Exploitation	X			Personal study and information search	1,66	6,5
	6	Exercises on basic instruction level parallelism		X		Problem solving	1,66	
4	7	Instruction Level Parallelism	X			Personal study and information search	1,66	6,5
	8	Lab: Instruction level parallelism		X	Comp: Online	Lab execution. Result delivery	1,66	
5	9	Limits of instruction level parallelism	X			Personal study and information search	1,66	6,5
	10	Exercises on advanced instruction level parallelism		X		Problem solving	1,66	
6	11	Cache memory	X			Personal study and information search	1,66	6,5
	12	Exercises on cache memory		X		Problem solving	1,66	
7	13	Optimization of cache memory system	X			Personal study and information search	1,66	6,5
	14	Introduction to parallel programming with OpenMP		X		Familiarization with parallel programming	1,66	
8	15	Virtual memory and virtual machines	X			Personal study and information search	1,66	6,5
	16	Lab: OpenMP		X	Comp: Online	Compilation, execution, and performance measurements	1,66	

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9	17	Concurrent Programming in C++	X			Personal study and information search	1,66	6,5
	18	Exercises on memory hierarchy		X		Problem solving	1,66	
10	19	Symmetric Shared Memory Architectures	X			Personal study and information search	1,66	6,5
	20	Distributed Memory Architectures. Exercises on cache coherence		X		Problem solving	1,66	
11	21	Memory consistency models	X			Personal study and information search	1,66	6,5
	22	Exercises on memory consistency		X		Problem solving. Project delivery	1,66	
12	23	Non sequential consistency and lock-free programming	X			Personal study and information search	1,66	6,5
	24	Lab: lock free programming		X	Comp: Online	Lab execution. Result delivery	1,66	
13	25	Synchronization in shared memory	X			Personal study and information search	1,66	6,5
	26	Exercises on synchronization		X		Problem solving	1,66	
14	27	Storage and reliability	X			Personal study and information search	1,66	6,5
	28	Exercises on storage and reliability		X		Problem solving	1,66	
	29	Lab: Cache memory (week 10)		X	Comp: Online	Lab execution. Result delivery	1,66	3,25
<b>Subtotal 1</b>							<b>48</b>	<b>94</b>
<b>Total 1 (Hours of class plus student homework)</b>							<b>142</b>	
15		Tutorials, handing in, etc					3,6	-
16	17 18	Assessment					4	10
17								
18								
<b>Subtotal 2</b>							<b>8</b>	<b>10</b>
<b>Total 2 (Hours of class plus student homework)</b>							<b>18</b>	
<b>TOTAL (Maximun 160 horas )</b>							<b>160</b>	