Universidad Carlos III de Madrid
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COURSE: MICROSYSTEMS AND NANOELECTRONICS		
MASTER: ELECTRONIC SYSTEMS ENGINEERING AND APPLICATIONS	**YEAR: 2015-16**	**TERM: 2nd**

WEEKLY PLANNING							
WEEK	**SESSION**	**DESCRIPTION**	**GROUPS (mark X)**		**Special room for session (computer classroom, audio-visual classroom…)**	**WEEKLY PROGRAMMING FOR STUDENT**	
			LECTURES	SEMINARS/ LAB[1]		DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Introduction to Electronic Microsystems Fabrication	X			Previous reading. Answering questions about background.	1,5	4
1	2	Microsystems Design Fundamentals. Examples.	X			Previous reading. Revision of Class Materials.	1,5	
2	3	Optical MEMs: Introduction, chronology, classification. Micromirrors technology. Scanning applications.	X			Previous reading. Revision of Class Materials.	1,5	7
2	4	Optical MEMs for displays and optical Communication.	X			Previous reading. Revision of Class Materials.	1,5	
3	5	Microsystems: Discussion of Case Studies		X		The students, split in groups, will prepare the description of a case study that will be discussed in class	1,5	
3	6	Introduction to Nanoelectronics and Fundamental	X			Previous reading. Revision of Class Materials.	1,5	

4	7	Fundamentals of Nanoelectronics: Electronic Properties and Quantum Effects	X			Previous reading. Revision of Class Materials.	1,5	
4	8	Technological Aspects: Fabrication	X			Previous reading. Revision of Class Materials.	1,5	
5	9	Technological Aspects: New materials and Components (CNT, Graphene,…)	X			Previous reading. Revision of Class Materials.	1,5	
5	10	Nanoelectronic Logic Devices	X			Previous reading. Revision of Class Materials.	1,5	
6	11	Nanoelectronic Sensors and Sensors arrays	X			Previous reading. Revision of Class Materials.	1,5	
6	12	Nanoelectronics: Discussion of Case Studies	X			The students, split in groups, will prepare the description of a case study that will be discussed in class	1,5	
7	13	Molecular Electronics and Metatronics	X			Previous reading. Revision of Class Materials.	1,5	5
7	14	Quantum Computing		X		Previous reading. Revision of Class Materials.	1,5	
¹ A maximum of 1-2 lab sessions						**Subtotal 1**	21	34
Total 1 *(Hours of class plus student homework hours between weeks 1-7)*							55	

1-7		Tutorials, handing in, etc					10	
8		Assessment					3	7
						Subtotal 2	3	17
Total 2 *(Hours of class plus student homework hours at week 8)*							20	

TOTAL *(Total 1 + Total 2)*	75