



<b>SUBJECT:</b> Mechanical systems for clinical engineering		
<b>MASTER DEGREE:</b> Master in Bioengineering and Clinical Engineering	<b>ECTS:</b> 3	<b>QUARTER:</b> 1

TIMETABLE FOR THE SUBJECT								
WEEK	SESSION	DESCRIPTION OF EACH SESSION	GROUP (X mark)		Indicate if a different lecture room is needed (computer, audiovisual, etc.)	HOMEWORK PER WEEK		
			1	2		DESCRIPTION	ATTENDING HOURS	HOMEWORK Max. 7H/WEEK
1	1	SUBJECT 1. INTRODUCTION TO THE SUBJECT	X		NO	Presentation of the subject and review of general mechanical Eng. concepts applied to the design, assembly and operation of a mechanical system.	1,5	4
2	2	SUBJECT 2. STRUCTURE AND COMPONENTS OF A MECHANICAL SYSTEM (I)	X		NO	Systematic study of elementary mechanisms. Description and applications	1,5	2
3	3	SUBJECT 2. STRUCTURE AND COMPONENTS OF A MECHANICAL SYSTEM (II)	X		NO	Study of mechanisms and elements: bearings and cams	1,5	3
4	4	SUBJECT 2. STRUCTURE AND COMPONENTS OF A MECHANICAL SYSTEM (III)	X		NO	Study of mechanisms and elements: gears	1,5	3



5	5	SUBJECT 2. STRUCTURE AND COMPONENTS OF A MECHANICAL SYSTEM (IV)	X		NO	Study of deformable members and regulation of machines. Special mechanisms.	1,5	3
6	6	SUBJECT 3. INDUSTRIAL PNEUMATICS (I)	X		NO	General aspects of a compressed air system. Compressed air generation/distribution	1,5	2
7	7	SUBJECT 3. INDUSTRIAL PNEUMATICS (I)	X		NO	Command and control elements (I)	1,5	2
8	8	EXERCISES SUBJECT 3 (I)	X		NO	Resolution of elementary pneumatic circuits.	1,5	4
9	9	SUBJECT 3. INDUSTRIAL PNEUMATICS (I)	X		INF	Control elements (II) and circuit design	1,5	2
10	10	EXERCISES SUBJECT 3 (II)	X		NO	Resolution of pneumatic circuits	1,5	5
10	11	LAB 1	X		NO	Pneumatic circuits design	1,5	2
11	12	SUBJECT 4. INDUSTRIAL HYDRAULICS (I)	X		NO	Principles and concepts on hydraulic. Design phases of an installation.	1,5	2



12	13	SUBJECT 4. INDUSTRIAL HYDRAULICS (II)	X		NO	Analysis and operation of the passive and active components of a hydraulic installation	1,5	3
13	14	SUBJECT 4. INDUSTRIAL HYDRAULICS (III)	X		NO	control and design of hydraulic circuits	1,5	3
14	15	EXERCISES SUBJECT 4	X		NO	resolution of elementary hydraulic circuits	1,5	5
14	16	LAB 2	X		LAB	installation of pneumatic circuits	1,5	2
15	17	PERSONAL WORK	X		NO		1,5	12
16	18	EXAM	X		NO		1,5	
<b>TOTAL HOURS</b>							<b>28,5</b>	<b>59</b>