



**SUBJECT NAME: Machines technology**

**DEGREE: Industrial Technologies Engineering**

**YEAR: 3°**

**QUARTER: 2°**

**SUBJECT SCHEDULE**

WE- EK	SE- SS- ION	CONTENT DESCRIPTION OF SESSION	GROUP (Mark X)		Indicate space necessary different classroom (inform aula, laboratory, etc..)	Indicate YES/NO it's a session with 2 professors  (*)	STUDENT'S WORK DURING THE WEEK		
			BIG	SM- ALL			DESCRIPTION	HOURS PRESENT	WORKING HOURS Week Maximum 7 H
1	1	Introduction. Strength of Materials.	X			NO	Remember and apply concepts of strength of materials	1,66	5
1	2	Fatigue Theory I		X		NO	Learn fatigue theories	1,66	
2	3	Fatigue Theory II	X			NO	Apply fatigue theories	1,66	6
2	4	Fatigue Exercises I		X		NO	Do fatigue exercises	1,66	
3	5	Axle Theory	X			NO	Particularization of fatigue theories for axles	1,66	5
3	6	Fatigue Exercises II		X		NO	Do fatigue exercises	1,66	
4	7	Gear theory	X			NO	Learn fundamental concepts of gears	1,66	5
4	8	Fatigue Exercises III		X		NO	Do fatigue exercises	1,66	
5	9	Gear Failure theory	X			NO	Learn the main theories of the failure of gears.	1,66	5



5	10	Axle Exercises		X		NO	Do axle exercises.	1,66	
6	11	Tribology	X			NO	Fundamental concepts of tribology	1,66	5
6	12	PRACTICE (Axle Fatigue Exercises)		X	inform aula	NO	Practice of calculating axle fatigue.	1,66	
7	13	Lubrication theory	X			NO	Learn the main theories of lubrication	1,66	5
7	14	Lubrication Exercises		X		NO	Do lubrication exercises.	1,66	
8	15	Theory of rolling bearings I	X			NO	Basic Rolling bearing concepts.	1,66	5
8	16	PRACTICE (Gear Failure)		X	inform aula	NO	Practice of calculating gear fatigue.	1,66	
9	17	Theory of Rolling bearings II	X			NO	Rolling Bearing life calculation.	1,66	6
9	18	Rolling bearing Exercises		X		NO	Bearing life calculation Exercises	1,66	
10	19	Clutch theory	X			NO	Clutch parts, operation and design.	1,66	6
10	20	Clutch Exercises		X		NO	Do clutch exercises.	1,66	
11	21	Drum brakes	X			NO	Drum brake parts, operation and design.	1,66	5
11	22	PRACTICE (Clutch)		X	1.1.N04	NO	Practice: Clutch elements.	1,66	
12	23	Drum brakes Exercises	X			NO	Do drum brakes exercises	1,66	5
12	24	PRACTICE (Springs)		X	1.0.C03	NO	Practice: Description of the fundamental concepts of springs and practical application	1,66	



13	25	Disc brakes	X			NO	Disc brake parts, operation and design.	1,66	6
13	26	Disc brakes exercises		X		NO	Do disc brakes exercises	1,66	
14	27	Belts	X			NO	Fundamental concepts of belt drive and selection.	1,66	5
14	28	Belts exercises		X		NO	Do belts exercises	1,66	
<b>SUBTOTAL</b>								<b>46,5+75=120,5</b>	
15		Resits, tutorials, work delivery, etc				NO			
16-18		Evaluation preparation, Evaluation				NO			29,5
<b>TOTAL</b>								<b>150</b>	

**(\*)The maximum number of sessions with 2 professors and/or experimental laboratories is 4.**

<b>WEEKLY PLANNING EXPERIMENTAL LABORATORIES*</b>						
SE-SS-ION	WE-EK	DESCRIPTION CONTENT OF SESSION (The group is divided in two. In the schedule two sessions are scheduled in the lab indicated that week)	LABORATORY EN EL QUE SE REALIZAN LAS SESIONES	STUDENT'S WORK DURING THE WEEK		
				DESCRIPTION	HOURS PRESENT	WORKING HOURS Week Maximum 7 H
1	6	Fatigue	inform aula	Practical calculations applying fatigue theory	1,5	
2	8	Gears	inform aula	Practical calculations applying gear failure theory	1,5	
3	9	Assembly and disassembly of speed reducer	1.1.N04	Assembly and disassembly of speed reducer		
4	11	Clutch practice	1.1.N04	Dismantling a clutch and learning the function of each element.	1,5	1,5
5	12	Springs	1.0.C03	Description of the fundamental concepts of springs and practical application	1,5	1,5
<b>TOTAL</b>						