



COURSE: Mobile Robots		
STUDY: Master in Robotics and Automation	Year: 1st	Semester: 2nd

WEEKLY PLANNING OF THE COURSE									
WEEK	SESSION	DESCRIPTION OF THE CONTENT OF THE SESSION	GROUP (Cross with X)		Indicate if it is in a special room (computer room, audiovisual room, etc.)	Indicate if it is or not a session with 2 professors	WEEKLY EFFORT OF THE STUDENT		
			BIG	SMALL			DESCRIPTION	CLASS HOURS	INDIVIDUAL WORK (Max. 7h /week)
1	1	Introduction to the course Introduction to mobile robots. Locomotion systems. Representation of the environment systems.		X		No	Lecture on the topic. Individual study of the topic.	2	2
2	2	Geometric navigation. Geometric maps. Location and relocation of mobile robots. SLAM.		X		No	Lecture on the topic. Individual study of the topic.	2	2
3	3	Lab: Robotic algorithms.		X		No	Software review.	2	2
4	4	Topological Navigation of mobile robots. Topological maps. Generation of topological maps. Navigation. Location and relocation.		X		No	Lecture on the topic. Individual study of the topic.	2	2
5	5	Semantic Navigation. Semantic Modeling. Planning and semantic inference.		X		No	Lecture on the topic. Individual study of the topic.	2	2
6	6	Navigation in outdoor environment. Terrain		X		No	Lecture on the topic.	2	2

		modeling. Crossable and non-crossable areas. Planning in outdoor environment.					Individual study of the topic.		
7	7	Hardware of mobile robots. Building components of a mobile robot.		X		No	Individual study of the topic.	2	2
8	8	Lab: Hardware of mobile robots. Building components of a mobile robot.		X		No	Preparation of the lab contents.	2	2
9	9	Software de mobile robots		X		No	Individual study of the topic.	2	2
10	10	Lab: Software de mobile robots		X		No	Preparation of the lab contents.	2	2
11	11	Lab: Software de mobile robots		X		No	Preparation of the lab contents.	2	2
12	12	Lab: Software de mobile robots		X		No	Preparation of the lab contents.	2	2
13	13	Presentation of works.		X		No	Preparation of the presentations of the works.	2	30
14	14	Presentation of works.		x		No	Preparation of the presentations of the works.	2	30
Subtotal 1								28	94
Total 1 (Hours of class and individual work from week 1 to 14)								112	
15		Recovery classes, tutoring, home-work delivery, etc.						10	
16		Preparation of evaluation, and evaluation						4	24
17									
18									
Subtotal 2								4	24
Total 2 ((Hours of class and individual work from week 15 to 18)								38	
TOTAL (Total 1 + Total 2. Max 90 hours)								150	