



COURSE TITLE: FUSION REACTOR PHYSICS		
EUROPEAN MASTER OF SCIENCE IN NUCLEAR FUSION AND ENGINEERING	YEAR: 2nd	SEMESTER: 1ST

COURSE SCHEDULE									
WEEK	SESSION	DESCRIPTION OF THE CONTENTS	GROUP (Tick X)		Indicate if a space different from the classroom is required (laboratory, computer classroom, etc)	Indicate YES/NO if It is a session with two teachers (*)	STUDENT'S WEEKLY SCHEDULE		
			Lecture Class	Practical Class			DESCRIPTION	CLASS HOURS	HOMEWORK HOURS Máximum 7 H
1	1	1. Fusion power. The tokamak scheme	X				- Reading of proposed topics - Work on the subject, including bibliographic research	1,5	4
1	2		X				- Reading of proposed topics - Work on the subject, including bibliographic research	1,5	
2	3	1 (cont.)	X				- Reading of proposed topics - Work on the subject, including bibliographic research	1,5	6
2	4			X			- Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and debates	1,5	
3	5	2. Tokamak reactors	X				- Reading of proposed topics - Work on the subject, including bibliographic research	1,5	6

3	6			X			<ul style="list-style-type: none"> - Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and debates 	1,5	
4	7	2 (cont.)	X				<ul style="list-style-type: none"> - Reading of proposed topics - Work on the subject, including bibliographic research 	1,5	6
4	8	- Written test exam		X			<ul style="list-style-type: none"> - Written test exam 	1,5	
5	9	3. Stellarators. Stellarator reactors	X				<ul style="list-style-type: none"> - Reading of proposed topics - Work on the subject, including bibliographic research 	1,5	6
5	10			X			<ul style="list-style-type: none"> - Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and debates 	1,5	
6	11	4. Equilibrium and stability (tokamaks and stellarators)	X				<ul style="list-style-type: none"> - Reading of proposed topics - Work on the subject, including bibliographic research 	1,5	8
6	12			X			<ul style="list-style-type: none"> - Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and debates 	1,5	
7	13	5. Plasma confinement and transport in tokamaks	X				<ul style="list-style-type: none"> - Reading of proposed topics - Work on the subject, including bibliographic research 	1,5	6
7	14			X			<ul style="list-style-type: none"> - Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and debates 	1,5	
8	15	5 (Cont.)	X				<ul style="list-style-type: none"> - Reading of proposed topics - Work on the subject, including bibliographic research 	1,5	6
8	16			X			<ul style="list-style-type: none"> - Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and debates 	1,5	

9	17	6. Plasma heating and current drive in tokamaks	X				<ul style="list-style-type: none"> - Reading of proposed topics - Work on the subject, including bibliographic research 	1,5	6
9	18			X			<ul style="list-style-type: none"> - Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and debates 	1,5	
10	19	6 (Cont.)	X				<ul style="list-style-type: none"> - Reading of proposed topics - Work on the subject, including bibliographic research 	1,5	6
10	20			X			<ul style="list-style-type: none"> - Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and Debates 	1,5	
11	21	7. Heating and confinement in stellarator plasmas	X				<ul style="list-style-type: none"> - Reading of proposed topics - Work on the subject, including bibliographic research 	1,5	6
11	22			X			<ul style="list-style-type: none"> - Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and debates 	1,5	
12	23	8. Plasma-wall interaction in tokamaks	X				<ul style="list-style-type: none"> - Reading of proposed topics - Work on the subject, including bibliographic research 	1,5	6
12	24	- Written test exam		X			- Written test exam	1,5	
13	25	9. Plasma operation and control in tokamak reactors	X				<ul style="list-style-type: none"> - Reading of proposed topics - Work on the subject, including bibliographic research 	1,5	6
13	26			X			<ul style="list-style-type: none"> - Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and 	1,5	

							Debates		
14	27	10. Plasma-wall interaction, plasma operation and control in stellarator reactors	X				- Reading of proposed topics - Work on the subject, including bibliographic research	1.5	6
14	28			X			- Solution of proposed exercises - Presentation of short proposed works - Participation in discussions and Debates	1.5	
SUBTOTAL								42 + 84 = 126	
15		Support classes, delivery of proposed homework assignments, etc						2	5
16-18		Preparation for the written exams						2	15
TOTAL									150