

<b>CURRICULUM Structure of Matter - Plasmas [ITALY to FRANCE]</b>				
<b>ITALIAN STUDENT First year (PISA) 60 ECTS. At least 51 before departure (60 before February)</b>				
<b>Number</b>	<b>Name</b>	<b>CODE</b>	<b>ECTS</b>	<b>CFU TOTALI</b>
<b>COURSES (mandatory)</b>				
1	Fondamenti di interazione radiazione materia	232BB	9	9
at choice	Lab. Ottica Quantistica	106BB	12	12
	Lab. Ottica Quantistica + Metodi numerici Fisica	106BB,326BB	6+6	
1 at choice	Fisica Teorica 1	213BB	9	9
	Fisica Statistica	207BB	9	
<b>TOTAL ECTS</b>				<b>30</b>
<b>COURSES to be chosen in the following exams list for a total of 30 ECTS</b>				
	Fluidodinamica (se non già sostenuto alla LI) Fisica dei Plasmi; Teoria cinetica dei plasmi; Relatività generale; Sistemi Complessi; Fisica dello Stato Solido; Problemi Astrofisici; Teoria quantistica dei solidi			
<b>TOTAL ECTS</b>				<b>30</b>
<b>TOTAL First year ECTS</b>				<b>60</b>
<b>ITALIAN STUDENT Second year (Paris) 60 ECTS</b>				
<b>mandatory courses</b>				
1	Outils pour les Plasmas et la Fusion	TC1	3	
1	Magnétohydrodynamique	TC2	3	
1	Théorie Cinétique	TC3	3	
1	Ondes et Instabilités	TC4	3	
1	Méthodes numériques et simulations	TC5	3	
1	Diagnostic et instrumentation, acquisition, traitement et	TC6	3	
1	Physique atomique, moléculaire et rayonnement	TC7	3	
1	Plasmas spatiaux	O3	3	
1	Préparation stage UNIPI		6	
	TC5 and TC6 : 6 ECTS will be counted as Stage/Thesis			-6
<b>ECTS</b>			24	
Stage (Master Thesis)			36	<b>36</b>
6 ECTS counted as Stage/Thesis				<b>6</b>
<b>Totale Thesis ECTS</b>				<b>42</b>
<b>TOTAL ECTS</b>			60	
<b>END ITALIAN STUDENT</b>				

<b>FRENCH STUDENT First year (Paris, UPMC) 60 ECTS.</b>				
<b>Numero</b>	<b>Denominazione</b>	<b>SSD</b>	<b>ECTS</b>	<b>CFU TOTALI</b>
<b>BASIC COURSES (mandatory)</b>				
1	Mécanique statistique	4P002	9	<b>9</b>
1	Mécanique quantique	4P005	9	<b>9</b>
	Plasmas : Bases Physiques	4P015	3	<b>3</b>
	Cours d'anglais (English course)	MX...	3	<b>3</b>
	1 or 2 UE to be chosen in the list		6 or 3+3	<b>6</b>
	<b>TOTAL ECTS</b>			<b>30</b>
<b>COURSES to be chosen in the list</b>				
1 at choice	Physique atomique et moléculaires	4P050	6	<b>6</b>
	Atomes, ions, molécules	4P051	6	
1 at choice	Hydrodynamique	4P010	3	<b>3</b>
	Physique des transports	4P065	3	
	Plasmas dans la fusion et l'astrophysique	4P063	3	<b>3</b>
	1 or 2 UE to be chosen in the list		6 or 3+3	<b>6</b>
	Stage	4P058	12	<b>12</b>
	<b>TOTAL ECTS</b>		30	<b>30</b>
<b>TOTAL First year ECTS</b>				<b>60</b>
<b>FRENCH STUDENT Second year (in Pisa) 60 ECTS</b>				
1	Physics of Plasmas	238BB	9	<b>9</b>
1 at choice	Kinetic theory of plasmas	224BB	6	<b>6</b>
	Laser plasma accelerators		6	
	Stage (Master Thesis)	during full year		<b>45</b>
<b>TOTAL Second year ECTS</b>				<b>60</b>
<b>END FRENCH STUDENT</b>				