EUROPEAN MASTER ON FUSION SCIENCES AND ENGINEERING PHYSICS – FUSION EP

PROGRAMM 2nd YEAR: TRACK FUSION SCIENCES

	UCM / UC3M		UGent		U Lorraine		U Stuttgart	
SECOND YEAR – TRACK FUSION SCIENCE	Elective courses: 12 ECTS from :		Elective courses: 12 ECTS from :		Elective courses: 12 ECTS from :		Elective courses: 12 ECTS	
	Fusion Reactor Physics	6	Machine Learning	6	Equilibrium and MagnetoHydroDynamics	3	Seminar on Special Problems of Fusion Research	3
	Plasma Diagnostics and Materials Technology	6	Nonlinear Systems	6	Turbulence & Transport	3	Advanced Experimental / Computational Training	3
	Turbulence in Plasmas	3	Physics of Semiconductor Devices	6	Plasma Heating	3	Simulation of Reflectometry	2
	Magnetohydrodynamics	3	Physical Chemistry	6	Plasma Wall Interactions	3	Fusion Research	3
	Computational Plasma Physics	3	Modelling and Engineering of Nanoscale Materials	6	Modelling and Numerical Methods	3	Numerical Plasma Physics I	3
	Plasma in Space and Astrophysics	3	Physical Materials Science	6	Diagnostics for Fluctuations & Data Processing Methods	3	Numerical Plasma Physics II	3
	Intertial Confinement Fusion	3	Additional elective	6			Thermo and Fluid Dynamics	3
	Fluid Mechanics and Partial Differentiai Equations	3					Comput. Materials Modeling	3
	Computational Techniques in Atomic and Molecular Structure, Dynamics and Spectroscopy	6					Modeling of 2-Phase Flows I	3
							Advanced Statistical Physics	9
							Superconductivity I + II	9
							Advanced Atomic Physics I	4
							Advanced Quantum Theory	9
	Language and Culture	6	Language and Culture	6	Language and Culture	6	Language and Culture	6
	Joint Experimentation and Analysis Session in Prague (6 ECTS)							
	Joint Practicum in Cadarache (6 ECTS)							
	Master Thesis (30 ECTS)							