

EUROPEAN MASTER ON FUSION SCIENCES AND ENGINEERING PHYSICS – FUSION EP

PROGRAMM 2nd YEAR: TRACK FUSION TECHNOLOGY

	AMU / INSTN		CTU		UCM / UC3M		UGent		U Stuttgart	
	Elect. courses: 12 ECTS:		Elect. courses: 12 ECTS		Elect. courses: 12 ECTS from:		Elect. courses: 12 ECTS from:		Elective courses: 12 ECTS from:	
SECOND YEAR – TRACK FUSION TECHNOLOGY	Magnetic Confinement Fusion: Physics and Technology	4	Tokamak physics	6	Fusion Reactor Physics	6	Antennas and propagation	6	Numerical Investigation of Mode Propagation in Corrugated Waveguides	2
	Plasma-Wall Interaction, Discharge Plasmas	4	Fusion technology	6	Plasma Diagnostics and Materials Technology	6	Computational Materials Physics	6	Microwave Technology	3
	Atomic and Molecular Physics, Spectroscopy	4	ITER components, related research and programme	3	Advanced Materials for Fusion	3	Computer Control of Industrial Processes	6	Magnet-Technology for Fusion reactors incl. practice	4
	Power Sources and Materials in Extreme Environments	4	Fusion practicum	3	Plasma-Wall Interaction in Fusion Plasmas	3	Machine Learning	6	Vacuum technology and D/T Fuel cycle	4
	Superconductors for Fusion	4			Engineering in Fusion Devices: Robotics	3	Micro-analysis and Structure Determination in Materials Science	6	Thermal and neutronically loaded materials	4
	Laser Created Plasmas	4			Reactor Components (blankets, divertors) and Technology	3	Nuclear Instrumentation	6	Fusion technology B	4
					Nuclear Physics and Fusion Plasma Technology Applied to Industry	3	Physics of Semiconductor Devices	6	Seminar on special problems of fusion research	3
					Engineering in Fusion Devices: Design, Safety and Fuelling Technology	6	Thin Films: Physics and Technology	6	Advanced experimental/computational training	3
							Additional elective	6	Neutron Cross Section Theory +Nucl. Data Generat.	4
									Thermo and Fluid Dynamics	3
								Comput. Materials Modeling	3	
								Modeling of 2-Phase Flows I	3	
	Language & Culture	6	Lang. & Culture	6	Language & Culture	6	Language & Culture	6	Language & Culture	6
Joint Experimentation and Analysis Session in Prague (6 ECTS)										
Joint Practicum in Cadarache (6 ECTS)										
Master Thesis (30 ECTS)										