

**ANNEX OPTATIVES del Títol de Màster Universitari en ERASMUS MUNDUS D'ENGINYERIA FOTÒNICA, NANOFOTÒNICA I BIOFOTÒNICA / EUROPEAN MASTER IN PHOTONICS ENGINEERING, NANOPHOTONICS AND BIOPHOTONICS**

CODI	MATÈRIA OPTATIVA OBLIGADA MEMÒRIA VERIFICADA	CRÈDITS
<b>MDD708</b>	<b>Specialization University of Karlsruhe</b> <i>University of Karlsruhe</i>	<b>30</b>
ASSIGNATURES		
566918	Additive Key Competencies	3
566916	Advanced Spectroscopy	12
566914	Biomedical Photonics	12
566920	Industry Intership: Specialization	7
566915	Optical Systems	12
566913	Photonic materials and Devices	12
566919	Project Courses (Research Lab) to Elective Courses	4
566917	Seminar Course (Research Topics)	2

CODI	MATÈRIA OPTATIVA OBLIGADA MEMÒRIA VERIFICADA	CRÈDITS
<b>MDD709</b>	<b>Specialization University of Barcelona</b> <i>UB/UPC/UAB</i>	<b>30</b>
ASSIGNATURES		
564649	Nonlinear Dynamics <i>UPC</i>	2,5
564664	Active and Adaptive Optics <i>UPC</i>	2,5
566911	Image Processing <i>UB</i>	
564642	Advanced Experimental Optical Techniques in Biology <i>UPC</i>	2,5
566912	Spanish Language <i>UB</i>	
564652	Advanced Optical Instrumentation <i>UPC</i>	2,5
564657	Applied Nonlinear Optics and Optoelectronics <i>UPC</i>	2,5
563316	Atom Optics and Bose-Einstein Condensates <i>UB/UAB</i>	2,5
564651	Color Science <i>UPC</i>	2,5
564655	Holografia Digital <i>UB/UAB</i>	2,5
564663	Fabrication of Optical Elements <i>UPC</i>	2,5
564637	Fourier Optics <i>UB</i>	5
564641	Laser Systems and Technology <i>UB/UPC</i>	5
564653	Machine Vision Applications <i>UPC</i>	2,5
564648	Milestone Experiments in Quantum Optics <i>UPC</i>	2,5
564645	Nanophotonics <i>UPC</i>	2,5
564638	Optical Metrology <i>UPC</i>	5
564643	Optical Micromanipulation Workshop <i>UB</i>	2,5
564661	Optical Remote Sensing <i>UPC</i>	2,5

564636	Optomechanical Systems Design <i>UB/UPC</i>	5
564630	Photonics & Business <i>UPC</i>	2,5
564659	Photovoltaic Devices <i>UPC</i>	2,5
564646	Quantum Communication <i>UAB</i>	2,5
563315	Quantum Computation <i>UB/UAB</i>	2,5
564633	Quantum Optics <i>UAB</i>	5
564626	Seminars & Skills <i>UB</i>	2,5
564667	Ultrafast and ultraintense laser light <i>UPC</i>	2,5

CODI	MATÈRIA OPTATIVA OBLIGADA MEMÒRIA VERIFICADA	CRÈDITS
<b>MDD70B</b>	<b>Specialization University of Marseille</b> <i>University of Marseille</i>	<b>30</b>
<b>ASSIGNATURES</b>		
566927	Additive Key Competencies	2,5
566921	Advanced Microscopy Imaging Techniques	6
566923	Biomedical Optics	3
566922	Biophotonics	6
566925	From Data to Information and Images	5
566926	Lab Practice/Project Course	5
566924	Tools from Large Scale Instrumentation Imaging	2,5