



POLITÉCNICA

Universidad Politécnica de Madrid
School of Computer Engineering



2021-2022 academic year

CODE	COURSE TAUGHT IN ENGLISH	ECTS	YEAR	SEMESTER	INFORMATION AND CONTENTS	OBSERVATIONS
BACHELOR DEGREE IN INFORMATICS (COMPUTER) ENGINEERING						
105000001	Physical and Technological Foundations of Informatics	6	1	1	https://www.upm.es/comun_gauss/publico/guias	
105000002	Logic	6	1	1	https://www.upm.es/comun_gauss/publico/guias	Learning guide in Spanish
105000013	Programación I	6	1	1	https://www.upm.es/comun_gauss/publico/guias	
105000011	Communication	6	4	7 - 8	https://www.upm.es/comun_gauss/publico/guias	
105000159	Human-Computer Interaction	6	1	2	https://www.upm.es/comun_gauss/publico/guias	
105000046	Building up communications skills	3	3	5	https://www.upm.es/comun_gauss/publico/guias	
105000394	Programming project	3	3	5	https://www.upm.es/comun_gauss/publico/guias	
105000443	Programming Scalable Systems	3	4	8	https://www.upm.es/comun_gauss/publico/guias	Learning guide in Spanish
105000057	Semantic Web, Linked Data And Knowledge Graphs	3	4	7	https://www.upm.es/comun_gauss/publico/guias	
105000395	Introduction to bioinformatics and biocomputing	3	4	7	https://www.upm.es/comun_gauss/publico/guias	
105000439	The Art of Programming	3	3	5	https://www.upm.es/comun_gauss/publico/guias	
105000444	Multimedia	3	4	8	https://www.upm.es/comun_gauss/publico/guias	
105000441	Image Understanding	3	4	8	https://www.upm.es/comun_gauss/publico/guias	
EUROPEAN MASTER DEGREE IN SOFTWARE ENGINEERING						
103000482	Requirements Engineering	6	1	1	https://www.upm.es/comun_gauss/publico/guia	
103000483	Software Design	4	1	2	https://www.upm.es/comun_gauss/publico/guia	
103000484	Software Architecture	4	1	2	https://www.upm.es/comun_gauss/publico/guia	
103000485	Software Project Management	4	1	1	https://www.upm.es/comun_gauss/publico/guia	
103000486	Models and Methods for Process Improvement and Assessment	4	1	1	https://www.upm.es/comun_gauss/publico/guia	
103000487	Software Quality Management	4	1	2	https://www.upm.es/comun_gauss/publico/guia	
103000488	Software Metrics	4	1	1	https://www.upm.es/comun_gauss/publico/guia	
103000489	Verification and Validation	6	1	1	https://www.upm.es/comun_gauss/publico/guia	
103000547	Software Engineering Economics	6	1	1	https://www.upm.es/comun_gauss/publico/guia	
103000540	Critical Software	3	1	1	https://www.upm.es/comun_gauss/publico/guia	

103000541	Data Engineering	4	1	1	http://emse.fi.upm.es/wp-content/uploads/2019/	
103000546	Rigorous Software Development	4	1	1	https://www.upm.es//comun_gauss/publico/guia	
103000603	Challenges for accessible computing for people with functional diversity	4	1	1	https://www.upm.es//comun_gauss/publico/guia	
103000544	Management, Relationships and Communication in Working Groups	4	1	1	https://www.upm.es//comun_gauss/publico/guia	
103000545	Agile Software Development: Agile Practices and Agile Usability	4	1	1	https://www.upm.es//comun_gauss/publico/guia	
103000542	Experimental Software Engineering	6	1	2	https://www.upm.es//comun_gauss/publico/guia	
103000738	Computer Security	4	1	1	https://www.upm.es//comun_gauss/publico/guia	
103000538	Agent Based Software Engineering	6	1	2	https://www.upm.es/comun_gauss/publico/guias	
103000538	Interaction Design	6	1	2	https://www.upm.es//comun_gauss/publico/guia	
103000680	Fundamentals of Business Administration	4	1	2	https://www.upm.es//comun_gauss/publico/guia	
MASTER IN SOFTWARE AND SYSTEMS						
103000380	Management Strategies and Non-classical Software Development Methodologies	4	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000379	Experimentation in Software Engineering	4	1	2	https://www.upm.es/comun_gauss/publico/guias	
103000816	Software Critico	4	1	1	https://www.upm.es/comun_gauss/publico/guias	Learning guide in Spanish
103000381	21st Century Challenges for Software Engineering	4	1	2	https://www.upm.es/comun_gauss/publico/guias	
103000385	Software Verification and Validation	4	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000383	Rigorous Software Development	6	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000387	New Trends in Distributed Systems	4	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000390	Image Processing and Analysis	4	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000391	Knowledge Discovery in Databases	4	1	1	https://www.upm.es/comun_gauss/publico/guias	Learning guide in Spanish
103000590	Computer Security	4	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000389	Concepts, Practice And Research Challenges In Data Mining	4	1	2	https://www.upm.es/comun_gauss/publico/guias	
103000392	Intelligent Virtual Environments: Technologies, Architectures and Applications	4	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000393	Challenges of Accessible Computing for People with Functional Diversity	4	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000394	Scientific Method	2	1	1	https://www.upm.es/comun_gauss/publico/guias	
MASTER OF SCIENCE IN ARTIFICIAL INTELLIGENCE (DESCRIPTIONS) All the courses that are offered in English are taught in Spanish if ALL the enrolled students speak Spanish						

103000358	Participatory Decision Making and Negotiation	5	1	1	http://dia.fi.upm.es/masteria/sites/default/files/n	
103000359	Bayesian Networks	5	1	1	http://dia.fi.upm.es/masteria/sites/default/files/n	
103000363	Programmable Biology: DNA Computing and	5	1	1	http://dia.fi.upm.es/masteria/sites/default/files/n	
103000364	Logic Programming	5	1	1	http://dia.fi.upm.es/masteria/sites/default/files/n	
103000366	Multi-agent Systems	5	1	1	http://dia.fi.upm.es/masteria/sites/default/files/n	
103000367	Ontological Engineering	5	1	1	http://dia.fi.upm.es/masteria/sites/default/files/n	
103000368	Models of Reasoning	5	1	1	http://dia.fi.upm.es/masteria/sites/default/files/n	
103000371	Biomedical Informatics	5	1	1	http://dia.fi.upm.es/masteria/sites/default/files/n	
103000372	Seminars	10	1	2		
Master's Programme in Digital Innovation						
103000891	Research Methodology	1.5	1	2	https://www.upm.es/comun_gauss/publico/guias	
103000892	Data Visualization	3	1	1	https://www.upm.es/comun_gauss/publico/guias	Not this course 2021-22
103000850	Big Data	6	1	1	http://dia.fi.upm.es/mastercd/sites/default/files/c	
103000895	Data Processes	4.5	1	1	http://dia.fi.upm.es/mastercd/sites/default/files/c	
103000905	Programming For Data Science	4.5	1	2	http://dia.fi.upm.es/mastercd/sites/default/files/c	
103000936	Programming For Data Processing	4.5	1	2	https://www.upm.es/comun_gauss/publico/guias	
103000908	Data Science Seminars	4.5	1	2	http://dia.fi.upm.es/mastercd/sites/default/files/c	
103000896	Statistical Data Analysis	4.5	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000897	Machine Learning	4.5	1	1	http://dia.fi.upm.es/mastercd/sites/default/files/l	
103000898	Deep Learning	3	1	2	http://dia.fi.upm.es/mastercd/sites/default/files/l	
103000854	Cloud Computing And Big Data Ecosystems Design	4.5	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000899	Open Data And Knowledge Graphs	4.5	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000902	Bayesian Networks	3	1	2	http://dia.fi.upm.es/mastercd/sites/default/files/c	
103000907	Time Series Data Mining	3	1	2	http://dia.fi.upm.es/mastercd/sites/default/files/c	
103000903	Graph Analysis And Social Networks	3	2	1	https://www.upm.es/comun_gauss/publico/guias	
103000906	Image Processing, Analysis And Classification	4.5	1	2	http://dia.fi.upm.es/mastercd/sites/default/files/c	
103000901	Information Retrieval, Extraction And Integration	4.5	1	2	https://www.upm.es/comun_gauss/publico/guias	
103000851	Intelligent Systems	4.5	1	1	https://www.upm.es/comun_gauss/publico/guias	
103000900	Ethic/legal/social aspects in Data Science	3	1	2		
103000836	Data Management and Knowledge in Health	4	2	3	https://www.upm.es/comun_gauss/publico/guias	

103000837	E Health: Promoting Active And Healthy Ageing	4.5	2	3	https://www.upm.es/comun_gauss/publico/guias
103000838	Medical time series data mining	3	2	3	https://www.upm.es/comun_gauss/publico/guias
103000839	Complex data in health	4.5	2	3	https://www.upm.es/comun_gauss/publico/guias
103000840	Devices and Biometric Applications for e-Health	4	2	3	https://www.upm.es/comun_gauss/publico/guias
103000934	Software Verification and Validation	6	1	1	https://www.upm.es/comun_gauss/publico/guias
103000933	Requirements Engineering	6	1	1	https://www.upm.es/comun_gauss/publico/guias
103000937	Fundamentals of Finance	6	1	1	https://www.upm.es/comun_gauss/publico/guias
103000938	Blockchain And Services For Fintech Enterprise Integration	5	1	1	https://www.upm.es/comun_gauss/publico/guias
103000935	Data Mining (data Engineering)	4	1	2	https://www.upm.es/comun_gauss/publico/guias
103000939	Seminars On Systems For Finance	4.5	1	2	https://www.upm.es/comun_gauss/publico/guias
103000869	Introduction To Human-computer Interaction	3	1	1	https://www.upm.es/comun_gauss/publico/guias
	Design Methods for Human Computer Interaction				
103000871	Programming Of User Interfaces	6	1	1	https://www.upm.es/comun_gauss/publico/guias
103000877	Challenges For Accessible Computing For People With Functional Diversity	4	1	1	https://www.upm.es/comun_gauss/publico/guias
103000874	User Experience And Mobile Interaction	6	1	1	https://www.upm.es/comun_gauss/publico/guias
103000872	Evaluation Of Interactive Systems	3	1	2	https://www.upm.es/comun_gauss/publico/guias
103000857	Image Mining	3	1	2	https://www.upm.es/comun_gauss/publico/guias
Master's Programme in Innovation and Entrepreneurship					
103000818	Introduction to innovation and entrepreneurship management	6	1	1	https://www.upm.es/comun_gauss/publico/guias
103000821	Entrepreneurship & Business Modelling	6	1	2	https://www.upm.es/comun_gauss/publico/guias
103000819	Introduction to Technology watch and competitive intelligence	1	1	2	https://www.upm.es/comun_gauss/publico/guias
103000820	I&E Seminars	5	1	2	https://www.upm.es/comun_gauss/publico/guias
103000822	Launching of digital-based products and services	2	1	2	https://www.upm.es/comun_gauss/publico/guias
103000824	I&E Study	6	2	1	