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Master – MR11601D
Artificial Intelligence for Connected Industries

The Master program covers:

- advanced artificial intelligence technologies applied to networked systems and robotics;
- advanced technologies related to the design IoT computing systems, protocols and applications;
- novel network architectures emerging with network virtualization (NFV), edge computing (MEC) and softwarization (SDN, SD-x);
- modeling and performance evaluation of networks and computing systems, including 5G and beyond 5G systems;
- integration of artificial intelligence and novel decision-making frameworks for the operations and automation of communication networks and IoT Systems.

Admission requirements

International, extra-European and European students willing to pursue a Master degree program in English, and possessing a Bachelor-level degree in one of following fields: Computer Science, Electronics, Computer Engineering, Electrical Engineering, Software Engineering, ICT Engineering.

Admission is also possible at the M2 (2nd year level) if you can justify 4 years of university study in one of the fields mentioned above with equivalent M1 (1st year) courses.

Calendar

- Registration: till end of June
- Visa: till end of July
- Arrival: till end of September
- Start of classes: October
- End of classes: June

M1 Program	
Course title	ECTS
Artificial Intelligence and Machine Learning for Connected Systems	6
Operations Research	4
Parallel and Distributed Systems	6
Operating Systems and Computer Architecture	6
Network Security	6
Automatics	4
Distributed and Federated Learning	5
Wireless Mobile Networks	6
6 ECTS to choose:	
Refresh in programming languages	3
Sustainable IoT Architectures	3
Next Generation IEEE 802.11 standards	3
Data Management and Digital Transformation in Industrial Process Automation	3
Big Data Technologies for Connected Industries	3
Robot Predictive Maintenance	3
Advanced Python Programming	3
Integration of Virtual and Augmented Reality Technologies in Connected Industries	3
11 ECTS to choose:	
Intelligent Process and Factory Control	3
Complex Networks: Data Analysis and Network Science	4
Networks - Complements and Applications	6
Network Architecture	6
Computer Systems Modeling and Verification	6
Peer-to-Peer Systems and Blockchain	5
Datacenter Design and Operations	5
Scientific Communication I	2
Contemporary Economic Issues	3
Seminars from the Industry	3
Ethics and Sovereignty of Digital Infrastructures	3

M2 Program	
Course title	ECTS
Reinforcement Learning	3
Learning Robots	3
Robot Operating Systems	3
Network Virtualization and Automation	6
Advanced Experimental Projects on Connected Systems	6
9 ECTS to choose:	
Business Process Modeling	3
Advanced Automation of Industrial Processes and Services	3
Advanced Programming	9
Industrial Internet of Things	6
Algorithm Engineering and Data Structures	9
Embedded Systems: Applications and Cybersecurity	6
3 ECTS to choose:	
Applied Artificial Intelligence	3
WiFi and 5G Convergence in 6G	3
Smart Industry 4.0 Systems	3
Green AI Computing for Connected Industries	3
Communications for Precision Agriculture and Farming	3
Applications of AI and Cyber-threat Management	3
Programming and Communication of a Robotic Arm	3
AI4CI Activities: from research to business	3
Advanced Python Programming	3
FPGA Platforms: Programmable Embedded Systems	3
6 ECTS to choose:	
FLE - French as foreign language	6
English	6
Applied Artificial Intelligence	3
WiFi and 5G Convergence in 6G	3
Smart Industry 4.0 Systems	3
Green AI Computing for Connected Industries	3
Communications for Precision Agriculture and Farming	3
Applications of AI and Cyber-threat Management	3
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AI4CI Activities: from research to business	3
Advanced Python Programming	3
FPGA Platforms: Programmable Embedded Systems	3
Master thesis - Internship	21

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