

Curriculum Embedded Systems

PhD in EDT 2020/21

approved 30/04/2020 (TeCIP Institute Council)

TEACHER/S	TITLE	Front-Lesson Hours	CFU	Timetable
Prof. Buttazzo	Neural Network and Deep Learning: theoretical Foundations	30	3	From 12 January (4 hours per week) – 8 week course – until 1 March
Prof. Buttazzo/Dr. Biondi	Neural Network and Deep Learning: Implementation Issues	30 (Buttazzo 16, Biondi 14)	3	From 9 March (4 hours per week) – 8 week course – until first week of May
Prof. Buttazzo/Prof. Cucinotta	How to do Research	30 (Buttazzo 20, Cucinotta 10)	3	From 13 January (3 hours per week) – 10 week course – until end of March
Dr. Biondi	System-level Cyber-security	20	2	2 nd semester – July 2021 – 2 lectures per week to be agreed with students
Prof. Abeni	Linux Kernel Programming	20	2	1 st semester: 12/10, 19/10, 26/10, 9/11, 16/11, 23/11, 30/11, 7/12 (time slots: 9:30 - 12)
Prof. Abeni	Functional Programming Techniques	20	2	1 st semester: 14/10, 21/10, 28/10, 4/11, 11/11, 18/11, 25/11, 2/12 (time slots: 9:30 -12)
Prof. Abeni	Advanced Operating Systems	20	2	2 nd semester: 23/2, 2/3/2021, 9/3/2021, 16/3/2021, 23/3/2021, 30/3/2021, 6/4/2021, 13/ 4/2021 (time slots: 9:30 – 12)
Prof. Di Natale	Automotive SW systems	40	4	NA - Please contact the teacher
Prof. Cucinotta	Real-Time and High-Performance Computing on Linux	20	2	February – March, 4 hours per week
Prof. Cucinotta	Survey of Soft Real-Time Systems Research	30	3	October – January, 3 hours per week
Prof. Cucinotta	Cloud Computing & Big-Data	30	3	November – January, 6 hours per week
Prof. Cucinotta	Cloud Computing & Big-Data Lab	15	1	May – July, 3 hours per week

Curriculum Perceptual Robotics

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TEACHER/S	TITLE	Front-Lesson Hours	CFU	Timetable
Dr. Vannucci/Dr.ssa Colla*	Machine learning fundamentals, algorithms and applications through Python	35 (Vannucci 25, Colla 10)	3	2 nd semester - TBD – 2 lectures per week
Dr. Avizzano*/Dr. Filippeschi	Mechatronics*	40 (Avizzano 25, Filippeschi 15)	4	2 nd semester - TBD – 2 lectures per week
Dr. Avizzano*/Dr. Tripicchio	Digital Perception*	45 (Avizzano 30; Tripicchio 15)	4	1 st semester - TBD – 2 lectures per week
Dr. Avizzano/Dr. Tripicchio	Robotics Applications in Industry	30 (Avizzano 15, Tripicchio 15)	3	2 nd semester - TBD – 2 lectures per week
Dr. Solazzi/Dr. Filippeschi	Computer Aided Design for 3D geometric modeling	30 (Filippeschi 15, Solazzi 15)	3	NA - Please contact the teacher
Prof. Frisoli/ Prof. Solazzi	Advanced kinematics for robotics and human machine interfaces	30 (Frisoli 15, Solazzi 15)	3	NA - Please contact the teacher
Dr. Carrozzino/Dr. Tecchia	Virtual and Augmented Reality	60 (Dr. Carrozzino 30/Dr. Tecchia 30)	6	1 st semester - TBD – 2 lectures per week
Prof. Frisoli/ Dr. Solazzi	Laboratory of actuators and transducers for robotics	20 (Frisoli 10, Solazzi 10)	2	NA - Please contact the teacher

* course to be activated only with the participation of minimum 3 PhD students

Curriculum Photonic Technologies

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TEACHER/S	TITLE	Front-Lesson Hours	CFU	Timetable
Dr. Andriolli/Dr. Faralli	Photonic Integrated Circuits	30 (Faralli 10, Andriolli 20)	3	From 1/10 to 19/11 – Tue/Thur 8.30-10.30 – available on Didactive
Prof.ssa Bogoni	Photonics Laboratory	30	3	NA – Please contact the teacher
Prof.ssa Bogoni	Microwave Photonics	30	3	2 nd semester – starting from 15 March 2021 – it will be available on Didactive
Dr. Malacarne	Photonic for Switching and Remote Sensing	30	3	From 1/10 to 20/11 – Tue/Fri 11.00-13.00 – available on Didactive
Prof. Forestieri	Simulation techniques for digital communication systems	40	4	From 5/10 to 28/01/2021 – Mon 14.00-16.00 (more lectures from November) – available on Didactive
Prof. Forestieri	Communication theory and digital transmission	40	4	From 6/10 to 20/01/2021 – Tue/Wed 11.00-13.00 – available on Didactive
Dr. Oton / Dr. Faralli	Lab of Photonic Sensing and Components	40 (Oton 20, Faralli 20)	4	From 7/10 to 9/12 – Wed 14.00-18.00 – available on Didactive
Prof. Valcarenghi	Network Simulations	30	3	From 6/10 to 24/11 – Tue 14.00-16.00/Wed 8.30-10.30 – available on Didactive
TBD*	FPGA for Communications Networks	20	2	2 nd semester – March 2021
Dr. Giorgetti	Laboratory of Network Software	30	3	2 nd semester – starting from 15 March 2021 – it will be available on Didactive
Dr. Sgambelluri	Laboratory of Teletraffic Engineering	30	3	2 nd semester – starting from 15 March 2021 – it will be available on Didactive
Dr. Sambo	Advanced optical networking	30	3	From 1/10 to 26/1/2021 – Thu 14.00-16.00 (more lectures from November and January) – available on Didactive
Prof. Contestabile	Laboratory of Photonic Integrated Circuits	40	4	2 nd semester – starting from 15 March 2021 – it will be available on Didactive

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Prof. Contestabile/Dr. Porzi	Photonic Technologies	30 (Contestabile 20, Porzi 10)	3	From 2/10 to 20/11 – Mon 16.30-18.30/Fri 14.00-16.00 – available on Didactive
Prof. Di Pasquale/Dr. Oton	Optical Fiber Sensor Systems	30 (Di Pasquale 20, Oton 10)	3	From 2/10 to 27/1/2021 – Fri 16.30-18.30 (more lectures from November and January) – available on Didactive
Prof. Di Pasquale/Dr. Velha	Integrated Photonic Circuits for Optical Fiber Sensing and Biosensing Applications	20 (Di Pasquale 6, Velha 14)	2	2 nd semester – February 2021 – 2 lectures per week
Prof. Di Pasquale	Electromagnetic Fields and Propagation	20	2	From 1/10 to 3/12 – Thu 1.00-13.00 – available on Didactive
Prof. Ciaramella/Dr. Cossu	Fundamentals of Applied Optics	40 (Prof. Ciaramella 30/Dr. Cossu 10)	4	2 nd semester – March 2021
Prof. Ciaramella	Design of Optical Systems	30	3	From 1/10 to 19/11 – Mon 11.00-13.00/Thu 16.30-18.30 – available on Didactive
Dr. Secondini	Fundamentals of optical communications	30	3	2 nd semester – starting from 15 March 2021 – it will be available on Didactive
Prof. Castoldi/TBD	Communication Networks and Security	60 (Castoldi 40, TBD 20)	6	From 2/10 to 27/1/2021 – Wed 16.30-18.30/Fri 8.30-10.30 (more lectures from November) – available on Didactive
Prof. Sorel	Optoelectronic devices for metrology	30	3	2 nd semester – starting from 15 March 2021 – it will be available on Didactive
Dr. Cossu/Dr. Rannello	Laboratory of Photonic Systems	30	3	From 5/10 to 27/1 - Mon 8.30-10.30 (more lectures from January) - available on Didactive
Prof. Castoldi	Stochastic Processes	30	3	From 5/10 to 25/1/2021 – Mon 8.30/10.30 (more lectures from January) – available on Didactive

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