Course name	Teacher	Scientific area	Target	Approach	Period	24-25	25-26
Advanced devices for high frequency applications	C. Ramella	DIS	Research group	Methodological	OCT-NOV	Yes	Yes
Advanced Scientific Programming in MATLAB	P. Bardella/S. Scialò	DIS	ScuDo	Methodological	JAN-FEB	Yes	Yes
Microelectronics for radiation detection-I	A. Rivetti	DIS	IEEC	Methodological	MAG-JUN	No	Yes
Microelectronics for radiation detection-II	G. Mazza	DIS	IEEC	Methodological	MAY	Yes	No
Nonequilibrium Green's functions modeling of optoelectronic devices	F. Bertazzi/Montoya	DIS	IEEC	Methodological	JUNE-JUL	Yes	No
Quantum modelling of nanodevices: the density gradient approach	S. Donati Guerrieri	DIS	Research group	Methodological	JAN-FEB	Yes	Yes
Semiconductor light sources for engineers	M. Gioannini / L. Columbo	DIS	Research group	Methodological	JUNE	No	Yes
Advances Techniques for Optimization	P. Pirinoli	ELN	ScuDo	Methodological	JAN	Yes	No
Computational electromagnetics in natural and in spectral domain	G. Lombardi	ELN	IEEC	Methodological	MAR-MAY	Yes	No
Development and management of data-acquisition systems	A. Carullo	ELN	IEEC+	Methodological	JUNE	Yes	Yes
Emerging Ultra-low Voltage, Ultra-low Power analog and mixed signal integrated circuits for the IoT	P. Crovetti	ELN	IEEC	Methodological	JUNE-JUL	Yes	Yes
Experimental modeling: costruzione di modelli da dati sperimentali	Taragna/Novara	ELN	ScuDo	Methodological	NOV-DEC	Yes	No
Instrumental methods of electrified interfaces	M. Serrapede	ELN	IEEC	Methodological	JUNE	Yes	No
Integral Operators and Fast Solvers: a cross-disciliplinary excursus on the best of FFT's companions	Francesco Andriulli	ELN	IEEC+	Methodological	NOV-JAN	No	Yes
Introduction to model order reduction	T. Bradde / S. Grivet	ELN	IEEC+	Methodological	FEB	Yes	No
Metamaterials: Theory and multiphysics applications	L. Matekovits	ELN	ScuDo	Methodological	MAR-APR	No	Yes
Microwave sensing and imaging for innovative applications in health and food industry	J. Tobon	ELN	IEEC+	Methodological	FEB-MAR	No	Yes
Nano & Molecular Electronics	G. Piccinini	ELN	IEEC	Informative	MAR-MAY	Yes	No
PCB Design	F. Fiori/ S. Musumeci; E. Raviola; F. Stella	ELN	IEEC	Methodological	FEB	Yes	Yes
Photonics: a key enabling technology for engineering applications	G. Perrone / A. Vallan	ELN	IEEC	Methodological	JUN-JUL	Yes	No
Spectral and Machine Learning Methods for Uncertainty Quantification	R. Trinchero	ELN	IEEC	Methodological	MAR-APR	No	Yes
System level low power techniques for IoT	M. Ruo Roch	ELN	IEEC	Methodological	JAN	Yes	Yes
Tecniche numeriche avanzate per l'analisi ed il progetto di antenne	F. Vipiana	ELN	IEEC+	Methodological	MAR	Yes	No
Advanced electric drives: modeling, design, and implementation	S. Rubino	ELT	IEEC	Methodological	SEP	Yes	No
Characterization and planning of small-scale multi-generation systems	G. Chicco	ELT	IEEC+	Methodological	SEP (one week intensive course)	Yes	No
Electric and magnetic field impact evaluation at industrial frequency	A. Canova / L. Giaccone	ELT	IEEC	Methodological	MAY	No	Yes
Electrical demand management	G. Chicco	ELT	IEEC+	Methodological	SEP (one week intensive course)	No	Yes
Electromagnetics in Magnetic Resonance Imaging	O. Bottauscio	ELT	Research group	Methodological	NOV	Yes	No
Inductor and transformer design for power electronic converters	L. Solimene	ELT	IEEC	Methodological	GEN	Yes	No
Magnetism and magnetic materials	M. Kuepferling / V. Basso	ELT	IEEC+	Methodological	APR	Yes	Yes
Mathematical-physical theory of electromagnetism	L. Zilberti	ELT	IEEC+	Methodological	MAY	No	Yes
Optimization methods for engineering problems	M. Repetto	ELT	ScuDo	Methodological	MAY	No	Yes
Parameter identification and self-commissioning techniques for AC motor drives	Paolo Pescetto	ELT	IEEC	Methodological	SEP	No	Yes
Photovoltaic generators and plants	F. Spertino	ELT	IEEC	Methodological	FEB/MAR	Yes	No
Power electronic devices in energy conversion applications	S. Musumeci	ELT	IEEC	Methodological	MAY	Yes	Yes
Power electronics for grid applications	R. Bojoi / F. Mandrile	ELT	IEEC	Methodological	JULY	Yes	No
Power systems economics	Huang Tao	ELT	IEEC+	Informative	MAR	Yes	Yes
Adversarial training of neural networks	D. Valsesia	TLC	IEEC	Methodological	MAR	Yes	Yes
Numerical Estimation Methods for Radionavigation and Geolocation: Theoretical Foundations and Algorithms	A. Minetto	TLC	IEEC+	Methodological	MAY	Yes	No
Optical transport networks	V. Curri / A. Carena/ P. Bardella	TLC	Research group	Methodological	FEB	Yes	Yes
Photonext: Hands on course on Photonics for Fiber Transmission	G. Rizzelli Martella	TLC	IEEC	Methodological	JUNE	No	Yes
Satellite Navigation signal exploitation for atmospheric and environmental monitoring	A. Minetto	TLC	IEEC	Methodological	MAY	No	Yes
Telemedicine and Distributed Healthcare	G. Pagana	TLC	IEEC+	Methodological	MAR	No	Yes

Legend

ScuDo: course addressed to all the PhD students of the Doctorate School.

IEEC: course addressed to all the PhD students of the Doctorate in Electrical, Electronics and Communications Engineering (IEEC).

IEEC+: course addressed to all the PhD students of the Doctorate in Electrical, Electronics and Communications Engineering (IEEC) and of possible interest to the students of other doctorate programs.

Research group: these courses present specialized topics, mainly of interest for students working in the same research field.

DIS: all PhD students belonging to the curriculum "Dispositivi Elettronici" ("Electron Devices") (including all students in DISAT and INFN).

ELN: all PhD students in DET, associated to the academic disciplines coded IINF-01/A (Electronics), IINF-02/A (Electromagnetic Fields), IINF-04/A (Systems and Control Engineering), IIET-01/A (Electrical Engineering), and NOT registered within the curriculum "Dispositivi Elettronici" ("Electron Devices").

ELT: all PhD students in DENERG and associated to the academic disciplines coded IIET-01/A; IIND-08/A; IIND-08/B; (Electrical Engineering; Power electronic converters, electrical machines and drives; Electrical power systems).

TLC: all PhD students in DET, associated to the academic discipline coded IINF-03/A (Telecommunications).