CORSO DI DOTTORATO IN SCIENZE E TECNOLOGIE DELLA CHIMICA E DEI MATERIALI

SUMMARY OF THE EDUCATIONAL ACTIVITY

OPENING LECTURE (2024):

SPEAKER	UNIVERSITY/RESEARCH CENTER/COMPANY	TITLE/TOPIC	DATE	PROPOSER
Elena Cattaneo	Università di Milano	To be defined	16 febbraio 2024	R. Riva

CONFIRMED TYPE "A" COURSES – 2024

TEACHER	UNIVERSITY/RESEARCH CENTER/COMPANY	TITLE/TOPIC	DATE	PROPOSER
Fabio De Moliner	University of Edinburg (UK)	Bioimaging: biology seen through the eyes of chemistry	Settembre 2024	A. Basso
Maria Lucia Curri	Università di Bari	To be defined		D. Peddis
Neil Telling	University of Keele (UK)	Magnetic nanoparticles for hyperthermia		T. Pellegrino
Daniele Ragno	Università di Ferrara	Flow chemistry		R. Riva

TYPE "B" COURSES – 2024

COURSE	CFU	TEACHERS	ENGLISH
Aspects of soft matter	2	A. Relini (UniGe)	On request
Atomic force microscopy, theory and practice	2	M. Salerno (IIT)	YES
Catalysts and adsorbents	2.5	E. Finocchio (UniGe), G. Garbarino (UniGe)	YES
Design of magnetic nano-architecture	2	D. Peddis (UniGe)	On request
Experimental design	2	F. Ardini (UniGe), B. Benedetti (UniGe)	YES
Fundamentals of scanning electron microscopy	2	P. Riani (UniGe)	YES
Fundamentals of spectral imaging	2	C. Malegori (UniGe), P. Oliveri (UniGe)	YES
Innovative pharmaceutical dosage forms: preparation and control methods	2	S. Baldassari (UniGe), G. Caviglioli (UniGe), G. Zuccari (UniGe), E. Russo (UniGe)	YES
Instrumental techniques for trace elements determination in pharmaceuticals, food products and environmental samples	2	G. Drava (UniGe)	Slides in english
Introduction to functional ceramic materials. Structure, properties, preparation and applications	2	V. Buscaglia (CNR)	YES
Introduction to polymer physical chemistry and characterisation techniques	2	N. Tirelli (IIT)	YES
Mathematical methods for chemistry	2	M. Ottonelli (UniGe)	Slides in English
Optical properties of materials	2	F. Bisio (UniGe), M. Canepa (UniGe), M. Magnozzi (UniGe), M. Sygletou (UniGe)	YES
Organic materials for photonics	2	D. Comoretto (UniGe)	YES
Organic photochemistry	2	A. Basso (UniGe)	YES
Principal plants used in phytocosmetics and their constituents	2	A. Bisio (UniGe)	YES
Surface science	3	L. Vattuone (UniGe)	YES
The ideal synthesis nowadays: lessons from the synthetic chemist Nature	2	C. Lambruschini (UniGe), L. Moni (UniGe)	YES
Theory of crystalline solids	3	S. Artyukhin (IIT)	YES

TYPE "B" COURSES – 2025 (to be decided)

COURSE	CFU	TEACHERS	ENGLISH
Crystalline solids: electronic correlations, instabilities and order	2	S. Artyukhin (IIT)	YES
Design and synthesis of protein-kinase inhibitors as anticancer agents	2	S. Schenone (UniGe)	YES
DNA nanotechnology	2	D. Garoli (IIT)	YES
Drug discovery: an introduction to the process leading to new small-molecule drugs	2	A. Armirotti (IIT), T. Bandiera (IIT), F. Bertozzi (IIT), M. De Vivo (IIT), S. Girotto (IIT), B. Grimaldi (IIT), D. Russo (IIT), R. Scarpelli (IIT), M. Veronesi (IIT)	YES
Elementary electronic structure of solids	3	L. Manna (IIT)	YES
INN and IUPAC nomenclature of organic drugs	2	G. Grossi (UniGe)	On request
Introduction to nanobiosensors	2	M. Salerno (IIT)	YES
Introduction to nanophotonics and nanofabrication	3	M. C. Giordano (UniGe)	YES
Molecular markers of food quality and genuineness	2	R. Boggia (UniGe), F. Turrini (UniGe)	On request
Multivariate analysis of chemical data	3	M. Casale (UniGe), C. Malegori (UniGe), P. Oliveri (UniGe)	On request
Optoelectronics of nanomaterials	2	I. Kriegel (IIT), D. Baranov (IIT), F. Di Stasio (IIT)	YES
Patent and bibliographic databases searching in medicinal chemistry	2	C. Brullo (UniGe), P. Fossa (UniGe)	YES
Perspectives on bioinorganic chemistry	2	S. De Negri (UniGe)	YES
Polymeric nanocomposites	2	O. Monticelli (UniGe)	YES
Process intensification	3	A. Servida (UniGe)	YES
Science at Large Scale Facilities: Neutron and Synchrotron Light sources	2	A. Martinelli (CNR-SPIN)	YES
Single crystal diffraction at work	2	P. Solokha (UniGe)	YES
The Rietveld method: fundamentals and applications	2	C. Artini (UniGe)	On request
Water soluble nanoparticles	2	T. Pellegrino (IIT)	YES

TYPE "F" COURSES – (2024 and 2025). These courses will be followed during the first year

Note: this section has still to be confirmed

COURSE	CFU	TEACHERS	ENGLISH
Materials characterization	1	M. Prato (IIT), L. Pasquale (IIT), S. Dante (IIT), L. Ceseracciu (IIT), M. Salerno (IIT)	YES
Nanomaterials and nano heterostructures: colloidal synthesis and chemical transformations	1	L. De Trizio (IIT)	YES
Advanced electron microscopy for materials science	1	R. Brescia (IIT), G. Divitini (IIT), I. Ivanov (IIT)	YES