DOCTORATE IN SCIENCES AND TECHNOLOGIES OF CHEMISTRY AND MATERIALS

EDUCATIONAL OFFER aa 2026-27

OPENING LECTURE – 2027

SPEAKER	AFFILIATION	TITLE/TOPIC	DATE	PROPOSER
Luca Bindi	University of Florence	Quasicrystalline shifting in natural orders	12-02-2027	D. Peddis

TYPE-A COURSES – November 2026 – October 2027 *

TEACHER	AFFILIATION	TITLE/TOPIC	DATE	PROPOSER
Gabriele Giancane	Università del Salento	From Polarization to Catalysis in Advanced Piezoelectric Materials and Their Functional Applications	Jan-Feb 2027	D. Peddis
Luigi Balzano	Kraton Corporation (Eindhoven)	An introduction to thermo-plastic elastomers (TPE) technology with focus on Styrenic Block Copolymers	Mar 2027	D. Cavallo
Frank Richard Wagner	Max Planck Institute for Chemical Physics of Solids (Dresda)	Chemical Bonding Analysis in Position Space for Molecules and Solids	Apr-2027	R. Freccero
Michele Iafisco	CNR ISMN di Bologna	Calcium Phosphate-Based Materials: Design, Applications and Translation from Laboratory Research to Innovation	Apr-2027	L. Degli Esposti
Oscar Francesconi	Università di Firenze	Sweet Recognition: From Carbohydrate Chemistry to Synthetic Supramolecular Receptors	Jan-Feb 2027	L. Moni
Eduardo Bolea-Fernandez	Università di Saragozza	Small entities, big insights: exploring the micro- and nanoscopic world from materials to environmental and biological sciences using single-event ICP-MS	Mar 2027	M. Grotti
Elisabetta Fanizza	Università di Bari	Engineering Colloidal Nanoparticle Interfaces Towards the Design of Functional (Hybrid) Nanostructures	Mar-Apr 2027	S. Slimani
Marta Zaccone	Proplast	Bridging Lab Innovation and Industrial Reality: Biopolymers, Advanced Recycling, and Functional Plastics		O. Monticelli
Marzia Ferrera	Università di Losanna	Nanophotonics for sustainable technologies	Mar-Apr 2027	M. Canepa
Mario Bonaccorso	Cluster SPRING	The circular bioeconomy for a competitive, innovative and resilient European Union		O. Monticelli
Anamaria Todea	University Politehnica Timisoara (Romania)	From Protein Structure to Molecular Docking: A Practical Introduction	Mar 2027	A. Pellis

Note: * the list of these courses includes only those already approved by the Doctoral Board and it is periodically updated.

TYPE-B COURSES – 2027

COURSE	CFU	TEACHERS	INDICATIVE PERIOD
Design and synthesis of protein-kinase inhibitors as anticancer agents	2	A. Carbone (UniGe), M. Tonelli (UniGe)	Mar-Apr-May-Jun
Drug discovery: an introduction to the process leading to new small-molecule drugs	2	A. Armirotti (IIT), F. Bertozzi (IIT), S. Decherchi (IIT), S. Girotto (IIT), B. Grimaldi (IIT), D. Russo (IIT), R. Scarpelli (IIT), M. Veronesi (IIT), P. Vidossich (IIT)	May
Electrochemistry for energy storage and conversion: theory and applications	2	M. Ferri (IIT), M. Ricci (IIT)	Mar-Apr
Electronic structure of solids	3	L. Manna (IIT)	Sep
Introduction to nanophotonics and nanofabrication	3	M. C. Giordano (UniGe)	Mar-Apr-May-Jun
Molecular markers of food quality and genuineness	2	R. Boggia (UniGe), F. Turrini (UniGe)	Jun
Multivariate analysis of chemical data	2	M. Casale (UniGe)	Jan-Feb
Patent and bibliographic databases searching in medicinal chemistry	2	C. Brullo (UniGe), A. Spallarossa (UniGe)	Jun
Organic materials for photonics	2	D. Comoretto (UniGe)	May-Jun-Jul-Sep
Perspectives on bioinorganic chemistry	2	S. De Negri (UniGe)	Apr-May
Polymeric nanocomposites	2	O. Monticelli (UniGe)	Nov-Dec
Radiopharmaceuticals: in silico design, diagnostic and therapeutic applications	2	E. Cichero, F. Musumeci (UniGe)	May-Jun
Science at large scale facilities: neutron and synchrotron light sources	2	A. Martinelli (CNR-SPIN)	Feb-Mar-Apr-May-Jun
Single crystal diffraction at work	2	P. Solokha (UniGe)	Apr-May-Jun
The Rietveld method: fundamentals and applications	2	C. Artini (UniGe)	Jun-Jul-Sep
Water soluble nanoparticles	2	T. Pellegrino (IIT)	Sep

TYPE-B COURSES – 2028

COURSE	CFU	TEACHERS	INDICATIVE PERIOD
Atomic force microscopy, theory and practice	2	M. Salerno (UniGe)	Feb-Mar-Apr
Catalysts and adsorbents	2	E. Finocchio (UniGe), G. Garbarino (UniGe)	Jan-Feb
Design of magnetic nano-architecture	2	P. Maltoni (UniGe), D. Peddis (UniGe), S. Slimani (UniGe)	Jun-Jul
Experimental design	2	F. Ardini (UniGe), B. Benedetti (UniGe)	Jun-Jul
Fundamentals of scanning electron microscopy	2	P. Riani (UniGe), R. Freccero (UniGe)	Mar-Apr-May-Sep
Fundamentals of spectral imaging	2	P. Oliveri (UniGe)	Apr-May
Innovative pharmaceutical dosage forms: preparation and control methods	2	G. Ailuno (UniGe), S. Baldassari (UniGe), E. Russo (UniGe), G. Zuccari (UniGe)	May
Instrumental techniques for trace elements determination in pharmaceuticals, inorganic nanomaterials, food products, environmental samples, and *in vivo* biokinetics evaluation	2	G. Drava (UniGe), V. Voliani (UniGe)	Mar-Apr-May
Introduction to functional ceramic materials. Structure, properties, preparation and applications	2	V. Buscaglia (CNR)	May
Introduction to polymer physical chemistry and characterisation techniques	2	N. Tirelli (IIT)	Jan
Main plants used in phytocosmetics and their constituents	2	A. Bisio (UniGe)	Jan-Feb
New trends in organic synthesis	2	C. Lambruschini (UniGe), L. Moni (UniGe)	Jan-Feb
Optical properties of materials	2	F. Bisio (UniGe), M. Canepa (UniGe), M. Magnozzi (UniGe)	Apr
Python programming tools for research in chemistry and materials science	2	G. Rossi (UniGe), A. Tagliabue (UniGe)	May-Jun
Surface science	3	L. Vattuone (UniGe)	Apr-May-Jun

TYPE-C COURSES – 2027 and 2028

COURSE	CFU	TEACHERS	INDICATIVE PERIOD
Introduction to transmission electron microscopy for materials science	1	R. Brescia (IIT), G. Divitini (IIT)	Apr-May
Materials characterization 1	1	L. Ceseracciu (IIT), S. Dante (IIT), M. Lorenzoni (IIT), L. Pasquale (IIT)	Mar-Apr-May
Materials characterization 2	1	S. Dante (IIT), L. Goldoni (IIT), L. Pasquale (IIT), M. Prato (IIT)	Mar-Apr-May
Nanomaterials and nano heterostructures: colloidal synthesis and chemical transformations	1	L. De Trizio (IIT)	Jun
Basic analytical models for magnetic actuation	1	E. Sinibaldi (IIT)	Mar-Apr-May