

**DOCTORATE IN SCIENCE AND TECHNOLOGY OF CHEMISTRY AND MATERIALS**

**TYPE B UNITS ACTIVATED IN 2017 OR 2018**

<b>Units</b>	<b>Credits</b>	<b>Teachers</b>	<b>English</b>	<b>2017</b>	<b>2018</b>
Multivariate analysis of chemical data	3	M. Casale R. Leardi P. Olivieri	YES	YES	NO
Pharmaceutical Biotechnology	3	M.Mazzei	YES	YES	YES
Industrial Catalysts and Adsorbents	2	G.Busca	YES	YES	YES
Advanced Course on Molecular Dynamics of Proteins	3	O. Moran	YES	YES	YES
Aspects of Soft Matter	2	A. Relini	YES	NO	YES
Basic Scanning and Transmission Electron Microscopies	3	P.Riani	YES	NO	YES
The Rietveld method: fundamentals and applications	2	C. Artini	YES	YES	YES
Organic photochemistry	2	A. Basso	YES	NO	YES
Introduction to RAMAN spectroscopy applied to materials.	2	M.Carnasciali	YES	YES	YES
Introduction to functional ceramic materials. Structure, properties, preparation and applications	2	V. Buscaglia	YES	NO	YES
Molecular markers of food quality and genuineness	2	R.Boggia, P.Zunin	Slides in English	YES	NO
Functional Magnetic Materials	2	F.Canepa	YES	YES	YES
Organic materials for electronics, optoelectronics and photonics	2	D.Comoretto	YES	NO	YES
Mathematical Methods for Chemistry	2	M.Rui M.Ottonelli	YES	YES	YES
Innovative pharmaceutical dosage forms: preparation and control methods	2	S.Baldassari G.Caviglioli, B.Parodi, E. Russo	YES	NO	YES
Experimental Design	3	M.Grotti, R.Leardi	YES	NO	YES
Polymeric nanocomposites	2	O.Monticelli	YES	NO	YES
INN and IUPAC nomenclature of organic drugs	2	G. Grossi	YES	YES	YES
Perspectives on bioinorganic chemistry	2	S. De Negri	YES	YES	YES
Principal plants used in Phytocosmetics and their constituents	2	A. Bisio	YES	NO	YES
Principi di metallurgia applicata: tradizione e innovazione.	2	M.R. Pinasco	NO	Alejandro Plaza (STM)	YES
Process Intensification	3	A.Servida	YES	YES	YES
Design and synthesis of protein-kinase inhibitors as anticancer agents	2	S. Schenone	YES	YES	NO
Optical properties of materials	3	M. Canepa F. Bisio	YES	YES	YES
Patent and bibliographic databases searching in medicinal chemistry	2	P. Fossa C. Brullo	YES	YES	NO
Surface Science	3	L.Vattuone	YES	NO	YES

Units	Credits	Teachers	English	2017	2018
Diversity Oriented Synthesis of Heterocyclic Compounds	2	R. Riva L. Moni	YES	NO	YES
Synthesis, structure and functional properties of intermetallic compounds	2	A.Saccone	YES	YES	YES
Elementary Electronic Structure of Solids	3	L. Manna	YES	YES	YES
Instrumental techniques for trace elements determination in pharmaceuticals, food products and environmental samples	2	V.Minganti, G.Drava	Slides in english	NO	YES
Nanomaterials and Nano-Heterostructures: Colloidal Synthesis and Chemical Transformations	1	L. De Trizio	YES	YES	
Basics of Crystallography and Diffraction by crystals	1	M. Prato	YES	YES	
Introductory course on transmission electron microscopy	1	R. Brescia, Z. Dang, J. Buha, R. Marotta	YES	YES	
Opto-Electronic Properties of Semiconductor Quantum Dots	1	I. Moreels	YES	YES	
Spectroscopies for chemical analysis	1	R. Palazon, R. Krahne, I. Moreels	YES	YES	
Mechanical properties + atomic force microscopy	1	L. Ceseracciu, M. Salerno	YES	YES	
Water soluble nanoparticles	1	T. Pellegrino	YES	YES	
Application of Nanocrystals in energy storage, photo-catalysis and heterogeneous catalysis	1	M. Colombo, D. Shinde, S. Monaco	YES	YES	
Drug Discovery part 1: Target and Hit identification	3	A. Reggiani, R. Bertorelli, B. Grimaldi, M. Veronesi, S. Giroto, T. Bandiera	YES	YES	
Drug Discovery part 2: Hit to Lead and Lead Optimization	2	R. Scarpelli, R. Riva, F. Bertozzi, T. Bandiera, A. Cavalli, M. De Vivo,	YES	YES	
Drug Discovery, part 3: Pharmacology, Development, Patents	1	A. Reggiani, R. Bertorelli,	YES	YES	