

MSc in Biotechnological and Chemical Sciences in Diagnostics

First Year

Topic	Scientific Area	Teachers	ECTS	Hours	Learning mode
Advanced Spectroscopy and Nanotechnology	PHYSICAL CHEMISTRY	GLORIA BERLIER VALENTINA CROCELLÀ MARTA CORNO	9	78	TRADITIONAL (48 h) ONLINE (24 h) PRACTICAL (6 h)
Cellular Biology for Diagnostic Technology	CELLULAR BIOLOGY	MIRIAM MARTINI ALESSIO MENGA	6	48	TRADITIONAL
Basic and Applied Molecular Biology	MOLECULAR BIOLOGY	VALERIA POLI ANDREA GRAZIANI	10	80	TRADITIONAL (56 h) ONLINE (24 h)
Bioanalytical Chemistry	ANALYTICAL CHEMISTRY	FEDERICA DAL BELLO MARCO VINCENTI LAURA ANFOSSI FABIO DI NARDO	12	96	TRADITIONAL
Advanced molecular immunology	IMMUNOLOGY	CLAUDIA CURCIO	6	48	TRADITIONAL (32 h) ONLINE (16 h)
In vivo diagnostics: imaging technologies	INORGANIC CHEMISTRY	FRANCESCA REINERI GIUSEPPE FERRAUTO DANIELA DELLI CASTELLI ELIANA GIANOLIO	9	56	TRADITIONAL (48 h) PRACTICAL (8 h)
Mathematical methods and tools	MATHEMATICS	MARINA MARCHISIO MARIA TERESA GIRAUDDO	3	24	TRADITIONAL ONLINE (START@UNITO)
Physical methods and tools	APPLIED PHYSICS	ANGELO BIFONE	3	24	TRADITIONAL
Traineeship	Student choice		6	150	LABORATORY

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In vivo diagnostics: imaging probes	INORGANIC CHEMISTRY	FRANCESCA REINERI GIUSEPPE FERRAUTO ELIANA GIANOLIO	9	72	TRADITIONAL
Medicinal Chemistry	PHARMACEUTICAL CHEMISTRY	SONJA VISENTIN GIUSEPPE ERMONDI	9	72	TRADITIONAL
Advanced Synthetic Strategies	ORGANIC CHEMISTRY	ANNAMARIA DEAGOSTINO	6	48	TRADITIONAL
Nuclear Medicine in Molecular Imaging: Radiochemistry	INORGANIC CHEMISTRY	ENZO TERRENO	3	24	TRADITIONAL
Nuclear Medicine in Molecular Imaging: Radiotheranostics	MEDICAL IMAGING	DESIREE DEANDREIS	3	24	TRADITIONAL
Further language ability: Italian (foreign students)			3	24	ONLINE (START@UNITO)
Further language ability: Inter-comprehension (italian students)			3	24	ONLINE (START@UNITO)
Traineeship	Student choice		6	150	LABORATORY ACTIVITY
Experimental thesis	Student choice		12	300	LABORATORY ACTIVITY

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Optional Courses (8 ECTS required)

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Advanced Mass Spectrometry	ANALYTICAL CHEMISTRY	CLAUDIO MEDANA	4	32	TRADITIONAL
Extracellular vesicles in diagnostics and precision medicine	MEDICAL TECHNOLOGIES	BENEDETTA BUSSOLATI	4	32	TRADITIONAL
Molecular Medicinal Chemistry	PHARMACEUTICAL CHEMISTRY	SONJA VISENTIN	4	32	TRADITIONAL
Computational Drug Discovery	PHARMACEUTICAL CHEMISTRY	GIULIA CARON GIUSEPPE ERMONDI	4	32	TRADITIONAL
Metals in Medicine and Biological Systems	INORGANIC CHEMISTRY	GIUSEPPE FERRAUTO	4	32	TRADITIONAL
Clinical applications of diagnostic technologies in Hematology	CLINICAL HEMATOLOGY	LUISA GIACCONE BENEDETTO BRUNO ALESSANDRA LAROCCA FRANCESCA GAY MARTA COSCIA	4	32	TRADITIONAL