



UNIVERSITÀ DEGLI STUDI DI TORINO

SCUOLA DI MEDICINA
DIPARTIMENTO DI BIOTECNOLOGIE MOLECOLARI E SCIENZE PER LA SALUTE
CORSO DI LAUREA MAGISTRALE IN MOLECULAR BIOTECHNOLOGY

MASTER PROGRAM IN MOLECULAR BIOTECHNOLOGY CURRICULUM TRANSLATIONAL BIOTECHNOLOGY A.A. 2022/2023			
FIRST YEAR			
First Semester			
BIO0136	Physiology		5 ECTS
BIO0167	Functional Genomics		8 ECTS
		Molecular Dynamics of Cellular Processes	5
		The Genetic Basis of Cancer	3
BIO0143	Genomics and Epigenomics		10 ECTS
		Computational Genomics and Epigenomics	5
		Genomics and Epigenomics of Gene Regulation	5
BIO0115	Interactions and Gene Networks		5 ECTS
Second Semester			
BIO0175	Biology of Regeneration and Development		10 ECTS
		Innovative experimental models in developmental biology and pathology	5
		Stem Cell Biology	5
BIO0114	Molecular Immunology		5 ECTS
BIO0171	In vitro diagnostics: molecular profiling of proliferative processes		5 ECTS
SECOND YEAR			
First Semester			
BIO0168	Chemistry for Health Sciences		13 ECTS
		Supramolecular and Bioinorganic Chemistry	3
		Nanomaterials	5
		Mass Spectrometry	5
BIO0169	Therapeutic Biotechnology		8 ECTS
		The molecular basis of neurological therapies	3
		The molecular basis of nephrologic therapies	5
BIO0170	Pharmacology and Drug Therapies		8 ECTS
		Pharmacological Biotechnology	3
		Drug Discovery: basic principles	5
Second Semester			
BIO0164	Biotech Companies Management		4 ECTS



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MASTER PROGRAM IN MOLECULAR BIOTECHNOLOGY FREELY CHOSEN COURSES (for both curricula) A.Y. 2022/2023			
SECOND YEAR			
I sem	BIO0185	Cancer Metabolism	4 ECTS
I sem	BIO0218	Metals in Medicine and biological systems	4 ECTS
I sem	BIO0178	Image Analysis for Biotechnologists	4 ECTS
I sem	BIO0192	Molecular Pharmacology	2 ECTS
I sem	BIO0213	Imaging of brain disease and therapy	4 ECTS
II sem	BIO00221	Methods in computational biology	6 ECTS
		Methods in computational biology I	2
		Methods in computational biology II	2
		Methods in computational biology III	2
II sem	BIO0186	Molecular Medicinal Chemistry	6 ECTS
II sem	BIO0187	Genetic Models of Human Pathology	6 ECTS
II sem	BIO0188	In vivo Imaging of Cancer Therapy	4 ECTS
II sem	BIO0189	Enabling technologies in drug synthesis and processing	4 ECTS
II sem	BIO0219	Pathologic basis of disease	4 ECTS
II sem	BIO0120	Scientific Communication	4 ECTS
		Scientific Communication 1	1
		Scientific Communication 2	2
		Scientific Communication 3	1
II sem	BIO0191	The Hallmarks of Ageing: molecular basis of ageing-associated syndromes	4 ECTS
II sem	BIO0217	Advanced Mass Spectrometry	4 ECTS
II sem	BIO0220	Computational Drug Discovery	4 ECTS
II sem	BIO0249	Biotechnology in and towards environmental sustainability	4 ECTS
		Biology for sustainability	2
		Environmental sustainability	1
		Biology for sustainable agrifood system	1