



UNIVERSITÀ
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. 2023/2024		
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
BIO0159	Stage I	6 ECTS
BIO0158	Thesis I	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
	Therapeutic biotechnology applied to regenerative medicine	5
BIO0170	Pharmacology and Drug Therapies	8 ECTS
	Pharmacological Biotechnology	3
	Drug Discovery: basic principles	5
Second Semester		
BIO0164	Biotech Companies Management	4 ECTS
BIO0165	Stage II	6 ECTS
BIO0166	Thesis II	14 ECTS



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**MASTER PROGRAM IN MOLECULAR BIOTECHNOLOGY
FREELY CHOSEN COURSES (for both curricula)
A.Y. 2023/2024**

First Semester

BIO0185	Cancer Metabolism	4 ECTS
BIO0218	Metals in Medicine and biological systems	4 ECTS
BIO0178	Image Analysis for Biotechnologists	4 ECTS
BIO0192	Molecular Pharmacology	2 ECTS
BIO0213	Imaging of brain disease and therapy	4 ECTS

Second Semester

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
BIO0186	Molecular Medicinal Chemistry	6 ECTS
BIO0187	Genetic Models of Human Pathology	6 ECTS
BIO0188	In vivo Imaging of Cancer Therapy	4 ECTS
BIO0189	Enabling technologies in drug synthesis and processing	4 ECTS
BIO0219	Pathologic basis of disease	4 ECTS
BIO0120	Scientific Communication	4 ECTS
	Scientific Communication 1	1
	Scientific Communication 2	2
	Scientific Communication 3	1
BIO0191	The Hallmarks of Ageing: molecular basis of ageing-associated syndromes	4 ECTS
BIO0217	Advanced Mass Spectrometry	4 ECTS
BIO0220	Computational Drug Discovery	4 ECTS
BIO0249	Biotechnology in and towards environmental sustainability	4 ECTS
	Biology for sustainability	2
	Environmental sustainability	1
	Biology for sustainable agrifood system	1