



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 BIOMEDICAL IMAGING AND DRUG DISCOVERY AA 2024/2025			
FIRST YEAR			
First semester			
BIO0108	PHYSIOLOGY AND BIOCHEMISTRY		10 ECTS
		Physiology	5
		Biochemistry	5
BIO0154	COMPUTATIONAL GENOMICS AND GENE NETWORKS		10 ECTS
		Computational genomics and epigenomics	5
		Interactions and Gene Networks	5
BIO0214	PRINCIPLES OF DRUG DISCOVERY		5 ECTS
BIO0153	SUPRAMOLECULAR CHEMISTRY AND SPECTROSCOPIC METHODS		8 ECTS
		Supramolecular and Bioinorganic Chemistry	3
		Spectroscopy of biomolecules	5
Second semester			
BIO0242	BIOMEDICAL IMAGING		11 ECTS
		PET/SPECT/CT	5
		MRI/OI/US/PAI	6
BIO0157	DATA ANALYSIS		6 ECTS
BIO0159	STAGE I		6 ECTS
BIO0158	THESIS I		5 ECTS
SECOND YEAR			
First semester			
BIO0255	ADVANCED MATERIALS AND METHODS FOR HEALTH SCIENCES		10 ECTS
		Mass Spectrometry	5
		Electron Microscopy	2
		Surfactants and nanoparticles	3
BIO0161	ADVANCED DRUG DISCOVERY		5 ECTS
BIO0163	IMMUNO-BASED ASSAYS FOR TRANSLATIONAL MEDICINE		7 ECTS
		Immuno-based assays for translational medicine I	5
		Immuno-based assays for translational medicine II	2
Second semester			
BIO0162	IN VITRO DIAGNOSTICS: PROTEOMICS, INTERACTOMICS AND METABOLOMICS		5 ECTS
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		
A.Y. 2024/2025		
FOR BOTH CURRICULA		
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 PHARMACOLGY	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
ONLY FOR CURRICULUM		
MOLECULAR COMPUTATIONAL AND TRANSLATIONAL BIOTECHNOLOGY		
BIO0256	ELECTRON MICROSCOPY	2 ECTS
BIO0257	SURFACTANTS AND NANOPARTICLES	3 ECTS