UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2020/21
BACHELOR
Biomedical Laboratory Techniques (Classe L/SNT3)
Enrolled 2017/18 academic Year

HEADING	
Degree classification - Denomination and code:	L/SNT3 Health professions for technical assistance
Degree title:	Dottore
Length of course:	3 years
Total number of credits required to complete programme:	180
Years of course currently available:	1st , 2nd , 3rd
Access procedures:	Cap on student, student selection based on entrance test
Course code:	D74

PERSONS/ROLES

Head of Interdepartmental Study Programme

Prof.ssa Lorenza Tacchini

Tutors - Faculty

Per l'orientamento:
Prof.ssa Lorenza Tacchini
Prof.ssa Cristina Battaglia
Prof.ssa Cristina Donetti
Prof. Lorenzo Drago
Prof.ssa Cristina Gervasini
Prof. Luca Massaccesi
Prof.ssa Elena Pariani

Per la mobilità internazionale e l'Erasmus:
Prof.ssa Stefania Recalcati

Per stage e tirocini:
Dott.ssa Maria Angela Corti

Per tesi di laurea:
Prof.ssa Lorenza Tacchini

Per riconoscimento crediti:
Prof.ssa Lorenza Tacchini

Degree Course website

https://tlb.cdl.unimi.it/it

https://www.unimi.it/it/studiare/frequentare-un-corso-di-laurea/iscriversi/iscriversi-una-prima-laurea

CHARACTERISTICS OF DEGREE PROGRAMME

General and specific learning objectives

In terms of the educational goals specific to this degree programme, and the professional baseline provided to programme graduates to continue their studies within the same discipline as their first degree or in other faculties or programmes within the University, the degree programme in Biomedical Laboratory Techniques has the following educational goals:
-possess an integrated body of theoretical knowledge in the field of laboratory sciences and techniques allowing students to analyse, assess, interpret, apply, and judiciously plan biomedical and bio-technological laboratory activities in terms of biochemical, microbiological / virological, pharmacological, toxicological, immunological, pathological, haematological, cytological, and histopathological analysis. They do so as independent professionals, but also in collaboration with other personnel holding a degree in laboratory science, and assigned various operating responsibilities;
-have theoretical knowledge of radiation-protection protocols and related regulations;
-possess an integrated body of practical knowledge in the field of laboratory sciences and techniques such that they might

bear the responsibility, within the scope of their own research and training, of conducting biomedical and bio-technological laboratory activities in terms of biochemical, microbiological / virological, pharmacological, toxicological, immunological, pathological, haematological, cytological, and histopathological analysis;
-possess a practical understanding of the application and monitoring of radiation-protection measures;
-have the requisite professional method so that services can be provided independently and safely, either alone or in collaboration with other personnel in complementary positions;
-be able to carry out, with all professional care and training, work protocols as set by one's executive supervisors;
-ensure that one's services match all indicators and standards established by the director in the clinic or hospital where one is working;
-be able to propose work-planning and -organisation criteria within the hospital or clinic in which one works;
-be able to control and check proper functioning of all devices used, handling routine maintenance on the same, and independently troubleshooting any minor issues;
-be able to read, interpret, and understand instructions and illustrative symbols in instruction and operating manuals, including in technical English;
-have a basic proficiency in the English language allowing them to work in their professional field both in Italy and in Europe (or beyond);
-acquire a liberal enough education to enter into a variety of two-year degree programmes after graduation.

Professional profile and employment opportunities

The Biomedical Laboratory Technician is a healthcare worker with a solid basis of practical knowledge in the field of laboratory sciences and techniques such that they might bear the responsibility, within the scope of their own research and training, of conducting biomedical and bio-technological laboratory activities in terms of biochemical, microbiological / virological, pharmacological, toxicological, immunological, pathological, haematological, cytological, and histopathological analysis;
Those earning a degree in Biomedical Laboratories provide their professional services on the job in an independent technical-professional manner in direct collaboration with other persons with a degree in laboratory sciences tasked with various operational responsibilities falling within their professional aegis. They are responsible, within their laboratory facilities, of the proper discharge of all analytical procedures, and the workplace protocols defined by supervisory executives; ensuring that their own professional services align with the indicators and standards established by the facility director; controlling and verifying proper equipment function, carrying out routine maintenance and basic troubleshooting; taking part in work planning and organisation within their own clinic.
Graduates of the Biomedical Laboratory Techniques programme may work for laboratory facilities in the public or private sector, as authorised under applicable law, as either an employee or independent professional. A basic proficiency in the English language allowing them to work both in Italy and Europe (or beyond) is important.
Professional opportunities for graduates of the Biomedical Laboratory Techniques programme may be found in:
_ laboratories engaged in clinical-biochemical, microbiological / virological analysis, pathological, haematological and immune-haematological, immunological, genetic-molecular, toxicopharmacological, cytohistoanatomopathological practice, working in a hospital or non-hospital setting within the National Healthcare System and in similar private facilities, and residential-care facilities with a scientific focus;
_ quality-control laboratories in the biomedical field for pharmaceutical industries;
_ manufacturing industries and commercial outfits operating in the field of laboratory diagnosis;
_ university and non-university research laboratories in the biomedical field.

EXPERIENCE OF STUDY ABROAD AS PART OF THE TRAINING PROGRAM

L'Università degli Studi di Milano sostiene la mobilità internazionale degli studenti, offrendo loro periodi di studio e di tirocinio all'estero, occasione unica per arricchire il proprio percorso formativo in un contesto nuovo e stimolante.

Gli accordi stipulati dall'Ateneo con oltre 300 università di 30 diversi Paesi nell'ambito del programma europeo Erasmus+ permettono agli studenti regolarmente iscritti di svolgere parte del proprio percorso di studi presso una delle università partner o seguire percorsi di tirocinio/stage presso imprese, centri di formazione e di ricerca e altre organizzazioni.

Analoghe opportunità di mobilità internazionale vengono garantite inoltre anche per destinazioni extra-europee, grazie ai rapporti di collaborazione stabiliti dall'Ateneo con diverse prestigiose istituzioni.

How to participate in Erasmus mobility programs

The students of the University of Milan can participate in mobility programmes, which last 3 to 12 months, through a public selection procedure.
Ad hoc commissions will evaluate:
• the candidate's proposed study programme abroad;
• his/her foreign language proficiency;
• the reasons behind his/her application.

Call for applications and informative meetings:
The public selection generally begins around February each year with the publication of a call for applications specifying the

destinations, with the respective programme duration, requirements and online application deadline.

Every year, before the deadline for the call, the University organizes informative meetings to illustrate opportunities and rules for participation to students.

Erasmus+ scholarship:
The European Union grants the winners of the Erasmus+ programme selection a scholarship to contribute to their mobility costs, which is supplemented by the University funding for disadvantaged students.

Language courses:
Students who pass the selections for mobility programmes can benefit from intensive foreign language courses offered each year by the University.

Learn more at https://www.unimi.it/it/internazionale/studiare-allestero/partire-con-erasmus.

For assistance, please contact:
International Mobility Office
Via Santa Sofia, 9 (second floor)
Tel. 02 503 13501-12589-13495-13502
E-mail: mobility.out@unimi.it
Desk opening hours: Monday to Friday 9 am - 12 noon

1st COURSE YEAR Core/compulsory courses/activities common

Learning activity		Ects	Sector
Basic analytical chemistry		1	ND
Biochemistry and Molecular Biology		6	(1) BIO/11, (5) BIO/10
Computer Science Course		3	INF/01
English assessment B1 (2 ECTS)		2	ND
General Pathology, Immunology and Hystory of Medicine		6	(4) MED/04, (2) MED/02
Human Anatomy		4	BIO/16
Human Physiology		4	BIO/09
Life Sciences		5	(1) MED/03, (2) BIO/17, (2) BIO/13
Medical Chemistry		4	BIO/10
Microbiology		5	(2) MED/46, (3) MED/07
Occupational health and safety		1	ND
Physics, Statistics and Radioprotection		9	(4) MED/01, (4) FIS/07, (1) MED/36
Traineeship (first year)		8	MED/46
	Total compulsory credits	58	

Elective courses

2nd COURSE YEAR Core/compulsory courses/activities common

Learning activity		Ects	Sector
Clinical Biochemistry and related diagnostic techniques		7	(3) MED/46, (4) BIO/12
Clinical Microbiology and related diagnostic techniques		5	(2) MED/46, (3) MED/07
Histological and Cytological Tecniques		5	MED/08
Medical Pathophysiology		6	(1) MED/13, (1) MED/14, (1) MED/15, (2) MED/09, (1) MED/06
Public health and laboratory organization		6	(2) ING-INF/05, (2) SECS-P/06, (2) MED/42
Technical science of biomedical laboratory		4	MED/46
Traineeship (second year)		23	MED/46
	Total compulsory credits	56	

Elective courses

3rd COURSE YEAR Core/compulsory courses/activities common

Learning activity	Ects	Sector
Diagnostic Techniques in Clinical Biochemistry, Molecular Biology and Clinical Pathology	7	(3) MED/05, (4) BIO/12
Diagnostic Techniques in Cytopathology and Histopathology	4	(2) MED/46, (2) MED/08

Diagnostic Techniques in Microbiology, Virology, Micology and Parasitology		4	(2) MED/46, (2) MED/07
Medical genetics pathologies		1	ND
Pharmacology/Toxycology and Legal Medicine		5	(2) MED/43, (3) BIO/14
Technical science of biomedical laboratory		3	MED/46
Traineeship (third year)		29	MED/46
	Total compulsory credits	53	
Elective courses			
End of course requirements			
Final examination		7	NA
	Total compulsory credits	7	

COURSE PROGRESSION REQUIREMENTS

The course contains the following obligatory or advised prerequisites

Learning activity	Prescribed foundation courses	O/S
Diagnostic Techniques in Cytopathology and Histopathology	Histological and Cytological Tecniques	Core/compulsory
Pharmacology/Toxycology and Legal Medicine	Medical Pathophysiology	Core/compulsory
Medical Pathophysiology	Human Physiology	Core/compulsory
	Human Anatomy	Core/compulsory
	Life Sciences	Core/compulsory
	General Pathology, Immunology and Hystory of Medicine	Core/compulsory
Histological and Cytological Tecniques	Human Physiology	Core/compulsory
	Human Anatomy	Core/compulsory
Diagnostic Techniques in Clinical Biochemistry, Molecular Biology and Clinical Pathology	General Pathology, Immunology and Hystory of Medicine	Core/compulsory
	Clinical Biochemistry and related diagnostic techniques	Core/compulsory
Clinical Biochemistry and related diagnostic techniques	Biochemistry and Molecular Biology	Core/compulsory
Clinical Microbiology and related diagnostic techniques	Microbiology	Core/compulsory
Diagnostic Techniques in Microbiology, Virology, Micology and Parasitology	Clinical Microbiology and related diagnostic techniques	Core/compulsory