



MASTER (LM) DEGREE COURSE IN
MEDICAL BIOTECHNOLOGIES

Study programme for students enrolled in the academic year 2025-2026

1st YEAR	
MANDATORY UNITS – First Semester	CREDITS
MOLECULAR BIOLOGY OF TISSUES	8
STEM CELLS AND DEVELOPMENTAL BIOLOGY	6
STATISTICS AND BIOINFORMATICS	8
INFECTIOUS DISEASES AND EPIDEMIOLOGY	6
MANDATORY UNITS – Second Semester	
EXPERIMENTAL SYSTEMS AND TECHNOLOGIES	6
MOLECULAR IMMUNOLOGY AND PATHOLOGY	8
THE BIOLOGY OF BIG DATA	8
NEW DRUG TARGETS AND BIOMOLECULES	6

2 FREE-CHOICE UNITS AMONG THE FOLLOWING	you can choose only one of:	SEMESTER	CREDITS
LABORATORY ACTIVITIES 1	✓	2nd	4
LABORATORY ACTIVITIES 2	✓	2nd	4
LABORATORY ACTIVITIES 3	✓	2nd	4
LABORATORY ACTIVITIES 4	✓	2nd	4
LABORATORY ACTIVITIES 5	✓	2nd	4
LABORATORY ACTIVITIES 6	✓	2nd	4
BIOMATERIALS OF TISSUE ENGINEERING		1st	4
HUMAN GENETICS IN HEALTH AND DISEASE: ACHIEVEMENTS AND NEXT GOALS		1st	4
BRIDGING SCIENCE AND BUSINESS: THE BIOTECH JOURNEY		1st	4

2nd YEAR		
MANDATORY UNITS – First Semester (FOR ULM STUDENTS TOO)		CREDITS
You can choose one of the four possible combinations among the following exam groups		
(A, B, C, D): A+C, A+D, B+C, B+D		
A	A and B are in the first part of the semester (October-November)	
	C and D are in the second part of the semester (December-January)	
A	AI FOR DIGITAL PATHOLOGY	8
	ANALYSIS OF OMICS DATA	8
B	NEXT GENERATION DIAGNOSTICS	8
	ADVANCED THERAPEUTIC STRATEGIES	8
C	DISEASE MECHANISMS: FROM DISCOVERY TO CLINICAL TRANSLATION	9
D	ADVANCED BIOTECHNOLOGIES	9

1 FREE-CHOICE UNITS AMONG THE FOLLOWING	CREDITS
BIOMATERIALS OF TISSUE ENGINEERING	4
HUMAN GENETICS IN HEALTH AND DISEASE: ACHIEVEMENTS AND NEXT GOALS	4
BRIDGING SCIENCE AND BUSINESS: THE BIOTECH JOURNEY	4
SEMINAR	1

FOR DOUBLE DEGREE STUDENTS AT ULM UNIVERSITY		
MANDATORY UNITS – First Semester	AT ULM UNIVERSITY	CREDITS
BLOCK "CELL BIOLOGY": 4 WEEKS RESEARCH INTERNSHIP, SEMINAR WITH INTEGRATED LECTURE	✓	12
CLINICAL TRIALS / PROJECT MANAGEMENT AND FUNDING	✓	6
SPECIALIZATION BLOCK "MOLECULAR ONCOLOGY II" / "TOXICOLOGY": 4 WEEKS RESEARCH INTERNSHIP, SEMINAR WITH INTEGRATED LECTURE	✓	12

MANDATORY UNITS – Second Semester	
FINAL THESIS/DISSERTATION	30

ANY FURTHER NOTES

ATTENDANCE REQUIREMENT: 75%