

MEDICAL BIOTECHNOLOGY MSc	Hrs/wk L/S/P	L	S-P	Semesters and credits				Examination	Co- ordinators
				I	II	III	IV		
Moduls/course (min.- max. credits)	Total credits	Credit	Credit						
A. CORE MATERIAL									
A.1. Foundation modul (25-40)									
<i>Basic science courses (20-30)</i>									
Biochemistry	4	2	2	4				Examination + progress grade	Krisztina Kovács
Introduction to molecular and cell biology	4	1	3	4				Examination + progress grade	Marianna Pap
Human Physiology	4	2	2	4				Examination + progress grade	Zoltán Karádi
Genetics	4	2	2	4				Examination + progress grade	Béla Melegh
Biophysics	4	2	2	4				Examination + progress grade	Beáta Bugyi
Informatics	4	1	3	4				Examination + progress grade	Csaba Fekete
<i>Basic economics and ethics courses (5-15)</i>									
Introduction to Economics	2	1	1	2				Examination	Katalin Erdős
Management	2	1	1	2				Examination	Ákos Jarjabka
Business law	1	1		1				Examination	Tibor Nochta
Ethics in Biotechnology	1	1		1				Examination	Tibor Szolcsányi
Foundation modul	30	14	16						
A.2. Specialized core material (20-40)									
Nucleic acid manipulation and vector design	4	1	3		4			Examination + progress grade	Judit Pongrácz
Proteins and protein networks	4	2	2		4			Examination + progress grade	Ferenc Kilar
Signal transduction	4	2	2		4			Examination + progress grade	Ferenc Boldizsár
Immunology	3	1	2		3			Examination + progress grade	Tímea Berki
Microbiology	3	1	2		3			Examination + progress grade	Júlia Szekeres- Barthó

Elective courses	Total credits (hrs/wk)	Credit L	Credit S/P	I	II	III	IV	Examination	Co-ordinators
Biotechnological methods in forensic medicine	3	1	2			3		Examination + progress grade	Katalin Sipos
Application of biomarkers in public health	3	1	2			3		Examination + progress grade	Zoltán Gyöngyi
Antibody and vaccine production in plants	4	2	2			2	2	Examination + progress grade	Gábor Jakab
Neurobiology	4	2	2			2	2	Examination + progress grade	Róbert Gábrriel
Enzyme biotechnology	2	2				2		Examination	Ferenc Boldizsár
Laboratory diagnostics	2	2					2	Examination	Attila Miseta
Introduction to Gerontology	2	2				2		Examination	Erika Pétervári
Molecular gerontology	2	1	1			2		Examination	Judit Pongrácz
Basics and application of fluorescence microscopy	2	1	1			2		Examination + progress grade	Gábor Hild
Modern biophysical research methods	2	1	1			2		Examination + progress grade	Gábor Hild
Nanobiotechnology	3	1	2			1	2	Examination + progress grade	László Grama
The cytoskeletal system	1	1				1		Examination	Miklós Nyitrai
Applied virology	2	1	1			1	1	Examination + progress grade	Ferenc Jakab
Immunopathology 1	2	2				2		Examination	Tímea Berki
Immunopathology 2	2	2					2	Examination	Júlia Szekeres-Barthó
Basic principles of electron microscopy in clinical practice and biological research	2	1	1					Examination + progress grade	László Seress
Capillary electrophoresis	2	1	1			1	1	Examination + progress grade	Ferenc Kilár
Statistical analysis	3	1	2			1	2	Examination + progress grade	László Pótó
Biometrics	1		1				1	Progress grade	László Pótó

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Clinicopathology	1	1					1	Examination	László Pajor
Biophysical background and clinical application of isotopdiagnostic and radiotherapeutic methods	2	1	1			2		Examination + progress grade	Katalin Zámbo
Genetic toxicology	1	1				1		Examination	Csaba Varga
Theoretical and clinical aspects of neuroendocrine experiments	1	1					1	Examination	Valér Csernus
Archeogenetics	1	1					1	Examination	István Kiss
Population genetics	1	1					1	Examination	István Kiss
Intellectual property law	1		1			1		Examination	György Zsolt Balogh
Basics of phytotherapy	1					1		Examination	Judit Pongrácz
Applied Experimental Pharmacology	1	2	1			1		Examination + progress grade	Judit Pongrácz
Experimental Immuno-Inflammation Pharmacology	1	2	1			1		Examination + progress grade	Judit Pongrácz
Managing successful EU projects	2	2	2				2	Examination + progress grade	Judit Pongrácz
Writing and managing successful Grant Proposals I.	2	2	2			2		Examination+ progress grade	Judit Pongrácz
Student Project Research	2		2		2			progress grade	Péter Balogh
Flow Cytometry (FC) in Modern Medical Diagnostics and Research	1		1		1			progress grade	Ferenc Boldizsár
Methods in molecular cell biology	2	1	1		2			Examination	Marianna Pap

Elective courses	Total credits (hrs/wk)	Credit L	Credit S/P	I	II	III	IV	Examination	Co-ordinators
Genetically Modified Organisms and Our Health	1	1				1		Examination	Zoltán Gyöngyi
Informatics of Medical Literature	2		2	2				progress grade	Ferenc Kilár
Molecular Medicine	1		1			1		Examination	Judit Pongrácz
Genetic toxicology -> Environmental Genotoxicology and Ecotoxicology	1	1				1		Examination	Csaba Varga
Total credit	72	44	35						

Additional Elective Courses	Total credits (hrs/wk)	Credit L	Credit S/P	I	II	III	IV	Examination	Co-ordinators
Communication in science	2	1	1				2	Progress grade	Judit Pongrácz
Global business strategies	1	1					1	Progress grade	Judit Pongrácz
Biotechnology from a business perspective	1	1				1		Examination	Judit Pongrácz
Molecular diagnostics	1					1		Examination	Judit Pongrácz
Molecular therapies	1					1		Examination	Judit Pongrácz
Basics of medical equipments	1					1		Examination	Judit Pongrácz
From the library to writing thesis	1		1			1		Examination	Katalin Sipos
The Antimicrobial Drugs and Their Clinical Use	2	2					2	Examination + fkj.	Béla Kocsis
Causes of expansion and preventive methods in infectious diseases	2		2				2	fkj.	Zoltán Tigyi
Emergency Medicine	1	1				1		fkj.	Zsófia Verzár
Physical Education	0		2				0	fkj.	Tamás Teczely
Placebo effect	1	1	0		1			Examination	Tibor Szolcsányi
Prevention of Dual Use of Biotechnology	1	1	0				1	Examination	Judit Pongrácz
Physiology of the Adaptation Limits of the Human Body	2	2	0		2			Progress grade	József Környei
Evolutionary Immunobiology	1	0	1			1		Examination	Péter Engelmann
Infections and Immunity	2	2	0				2	Examination + progress grade	Júlia Szekeres

Additional Elective Courses	Total credits (hrs/wk)	Credit L	Credit S/P	I	II	III	IV	Examination	Co-ordinators
Modern Biophysical Research Methods	2	0	2	2				Progress grade	Gábor Hild
Application of Biomarkers in Public Health	3	1	2	3				Examination +progress grade	Zoltán Gyöngyi
Stanford Lectures I.: Behavioural Genetics	2	2	0	2				Examination	Róbert Mátics
Total credit	13	6	6						