Compulsory modules Medical Life Sciences

MedCompact	Basics of medical science and terminology							
In which semester	Duration			Status	Admission requirements	Credit points in hrs	/workload	
1st +2nd semester	2 semesters			Comp.		6/ 180		
Component	Type of instruction	Con- tact hrs	CP ¹	Status	Type of examination	Evaluation	Weight	
Human biology for molecular disease research (1st semester)	Lecture with practical*	4	3	Comp.	Multi-part exam part 1: Oral exam	passed		
Pharmacology (2nd semester)	Lecture	3	3	Comp.	Multi-part exam part 2: Written exam			
IntroMed	Clinical man	ifestat	ions o	f disease	s and cell biology for cli	nical research	,	
In which semester	Duration			Status	Admission requirements	Credit points/workload in hrs		
1st semester	1 semester			Comp.		6/ 180		
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight	
Cell biology for clinical research	Lecture	2	2	Comp.	Multi-part exam part		500/	
<i>5,</i>	Seminar	1	1	Comp.	1: Oral exam	graded	50%	
Basics of clinical manifestations of diseases	Lecture	2	2	Comp.	Multi-part exam part	graded	50%	
Medical examination course	Tutorial*	1	1	Comp.	2: Written exam			
MolBio	Basics of mo	olecula	r resea	arch				
In which semester	Duration			Status	Admission requirements	Credit points	/workload	
1st semester	1 semester			Comp.		9/ 270 Stund	en	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight	
	Lecture	3	2	Comp.				
	Tutorial	1	1	Comp.	Written exam	xam		
Basics of molecular biology	Practical course*	5	5	Comp.	Interviews at start/ end of lab sessions (combined exam			
Introduction of research groups	Retreat	2	1	Comp.				

^{*} Classes with mandatory attendance

MolPatho/Immu	Pathology +	Immu	nology	/			
In which semester	Duration			Status	Admission requirements	Credit points in hrs	/workload
1st +2nd semester	2 semesters			Comp.		8/ 240	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Introduction to immunology (1st sem.)	Lecture	2	1	Comp.			
Introduction to molecular immunology (2nd sem.)	Lecture	2	1	Comp.		graded	
Basics of pathology (1st sem.)	Lecture	3	3	Comp.			
	Lecture	1	1	Comp.	Oral exam (2nd sem.)		
Molecular pathology (2nd sem.)	Seminar	1	2	Comp.	_ (Zna sem.)		
ScienceMethod	Medical Sta	tistics (Meth	odology (of Scientific research)		
In which semester	Duration			Status	Admission requirements	Credit points in hrs	/workload
1st semester	1 semester			Comp.		4/ 120	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Introduction to medical statistics and evidence-based medicine	Lecture	2	2	Comp.	Written exam	graded	
	Tutorial	1	2	Comp.			
Soft Skills	Skills for sci	entific	reseai	1		T	,
In which semester	Duration			Status	Admission requirements	Credit points/workload in hrs	
1st semester	1 semester			Comp.		4/ 120	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Orientation course: Studies and career	Seminar	2	2	Comp.			
Systems biology	Tutorial	2	1	Comp.	Written assignments	passed	
	Lecture	1	1	Comp.	during semester		
Projects	Project plan	ning					
In which semester	Duration			Status	Admission requirements	Credit points in hrs	/workload
2nd + 3rd sem.	2 semesters			Comp.	Active preparation of block seminar	5/ 150	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Project planning and management (2nd sem.)	Seminar	2	2	Comp.	Oral presentation project proposal in teamwork	_ passed	
Meet the expert – research block seminar (3 rd sem.)	Seminar	3	3	Comp.		P = 5 = 6	

Genetics	Human genetics/Scientific studies in medical research						
In which semester	Duration			Status	Admission requirements	Credit points/workload in hrs	
3rd semester	1 semester			Comp.		5/ 150	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Designing and realizing scientific studies	Lecture Seminar	1	1	Comp.	Multi-part exam part 1: Oral presentation		50%
	Lecture	2	2	Comp.	Multi-part exam part	_	
Basics of human genetics	Practical*	1	1	Comp.	2: Written tests for practical parts during semester (3-4; combined exam)	graded	50%
WritEng	English scien	ntific w	riting				<u>'</u>
In which semester	Duration			Status	Admission requirements	Credit points/ in hrs	workload
2nd + 3rd semester	2 semesters			Comp.		5/ 150	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
English Scientific Writing: Introduction (2 nd sem.)	Seminar	1	1	Comp.	Face weighting and		
· , ,	Tutorial	1	1	Comp.	Essay writing as homework (combined	passed	
English Scientific Writing/Presentation Techniques: Advanced skills (3 rd sem.)	Seminar Tutorial	1	1	Comp.	exam)		
BioInfo	Bioinformat	ics					
In which semester	Duration			Status	Admission requirements	Credit points/workloa in hrs	
2nd semester	1 semester			Comp.		5/ 150	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
	Lecture	2	2	Comp.			
Bioinformatics – basics and application	Tutorial	2	2	Comp.	Written exam	graded	
аррисатоп	Seminar	1	1	Comp.			
Techno	New techno	logies	in bioı	medical r	esearch		"
In which semester	Duration			Status	Admission requirements	Credit points/workload	
3rd semester	1 semester			Comp.		3/ 85 Stunden	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
New technologies in biomedical	Lecture	2	2	Comp.	Onel management		
research	Seminar	1	1	Comp.	Oral presentation	passed	

Electives outside focus areas (choose one)

EpiBio	Epidemiological and translational research approaches						
In which semester	Duration			Status	Admission requirements	Credit points/ in hrs	workload
2nd+3rd semester	2 semesters			Elec comp.		8/240	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Cardiovascular epidemiology –	Lecture	2	2	Comp.			
basics (2 nd sem.)	Seminar*	1	1	Comp.			
Cardiovascular epidemiology –	Lecture	2	2	Comp.			
continuation (3rd sem.)	Seminar*	1	1	Comp.			
Regenerative medicine <i>or</i> Neurosciences <i>or</i> Barrier functions: Molecular interaction Epithelium – environment (3rd sem.) <i>or</i> Inflammation + degeneration of the eye (3rd sem.)	Lecture	1	1	Comp.	Oral exam	graded	
Regenerative medicine <i>or</i> Neurosciences <i>or</i> Barrier functions: Molecular interaction Epithelium – environment (3rd sem.) <i>or</i> Inflammation + degeneration of the eye (3rd sem.)	Lab seminar*	2	1	Comp.			
Imaging	Imaging tec	hnique	s in bi	omedicin	e and translational rese	arch approache	es .
In which semester	Duration			Status	Admission requirements	Credit points/ in hrs	workload
2nd+3rd semester	2 semesters			Elec comp.		8/240	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Medical imaging: Diagnostics	Lecture	1	1	Comp.			
(2nd Sem.)	Seminar*	1	2	Comp.			
Medical imaging: Biomedical	Lecture	1	1	Comp.			
research (3rd Sem.)	Seminar*	2	2	Comp.			
Regenerative medicine <i>or</i> Neurosciences <i>or</i> Barrier functions: Molecular interaction Epithelium – environment (3rd sem.) <i>or</i> Inflammation + degeneration of the eye (3rd sem.)	Lecture	1	1	Comp.	Oral exam	graded	
Regenerative medicine <i>or</i> Neurosciences <i>or</i> Barrier functions: Molecular interaction Epithelium – environment (3rd sem.) <i>or</i> Inflammation + degeneration of the eye (3rd sem.)	Lab seminar*	2	1	Comp.			

DiseaseTrace	Tracing disease through time and translational research approaches						
In which semester	Duration		Status	Admission requirements	Credit points/workload in hrs		
2nd+3rd semester	2 semesters		Elec comp.		8/240		
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Tracing disease through time (2 nd	Lecture	2	2	Comp.			
sem.)	Seminar*	1	1	Comp.	-		
Tracing disease through time (3 rd sem.)	Lecture	1	1	Comp.			
	Seminar*	2	2	Comp.			
Regenerative medicine <i>or</i> Neurosciences <i>or</i> Barrier functions: Molecular interaction Epithelium – environment (3rd sem.) <i>or</i> Inflammation + degeneration of the eye (3rd sem.)	Lecture	1	1	Comp.	Oral exam	graded	
Regenerative medicine <i>or</i> Neurosciences <i>or</i> Barrier functions: Molecular interaction Epithelium – environment (3rd sem.) <i>or</i> Inflammation + degeneration of the eye (3rd sem.)	Lab seminar*	2	1	Comp.			

Focus areas I (choose one)

Inflammation I	Focus area I	nflamr	nation	ı			
In which semester	Duration			Status	Admission requirements	Credit points, in hrs	/workload
2nd semester	1 semester			Elec comp.	MolBio passed	5/ 150	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Introduction to clinical	Lecture	2	1	Comp.			
inflammation research	Seminar*	1	1	Comp.	Written exam	graded	
Case studies: Clinical practical	Clinical practical*	3	3	Comp.	Written exam	Біласа	
Practical Inflammation I	Research Pr	actical	Focus	area Infl	ammation I	'	
In which semester	Duration			Status	Admission requirements	Credit points in hrs	/workload
2nd semester	1 semester			Elec comp.	MolBio passed	6/ 180	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Block practical research — Lab 1	Practical*	3	3	Comp.			
Block practical research — Lab 2	Practical*	3	3	Comp.	Lab book	graded	
Longevity I	Focus area L	ongev	ity I		'	'	'
In which semester	Duration			Status	Admission requirements	Credit points, in hrs	/workload
2nd semester	1 semester			Elec comp.	MolBio passed	5/ 150	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Longevity – introduction to	Lecture	2	1	Comp.			
research of ageing and longevity	Seminar*	1	1	Comp.	Written exam	graded	
Case studies: Clinical practical	Clinical practical*	3	3	Comp.	Whiteen exam	Біласа	
Practical Longevity I	Research Pr	actical	Focus	area Lon	gevity I	'	
In which semester	Duration			Status	Admission requirements	Credit points, in hrs	/workload
2nd semester	1 semester			Elec comp.	MolBio passed	6/ 180	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Block practical research — Lab 1	Practical*	3	3	Comp.			
Block practical research — Lab 2	Practical*	3	3	Comp.	Lab book	graded	

Status Admission Credit points/work in hrs)ncolo	Focus area C	Oncology I
			Duration	In which semester
Elec comp. MolBio passed 5/ 150			1 semester	2nd semester
	СР	Con- tact hrs	Type of instruction	Component
1 Comp.	1	2	Lecture	Malignant diseases in humans -
1 Comp. Written exam graded	1	1	Seminar*	ntroduction
3 Comp.	3	3	Clinical practical*	Case studies: Clinical practical
al Focus area Oncology I	Focus a	actical	Research Pra	Practical Oncology I
Status Admission Credit points/work in hrs			Duration	In which semester
Elec comp. MolBio passed 6/ 180			1 semester	2nd semester
71	СР	Con- tact hrs	Type of instruction	Component
3 Comp.	3	3	Practical*	Block practical research — Lab 1
3 Comp. Lab book graded	3	3	Practical*	Block practical research — Lab 2
tionary Medicine I	onary I	volutio	Focus Area E	Evolutionary Medicine I
Status Admission Credit points/work requirements			Duration	In which semester
Elec comp. MolBio passed 5/150 Stunden			1 semester	2nd semester
7.	СР	Con- tact hrs	Type of instruction	Component
1 Comp.	1	2	Lecture	Evolutionary medicine -
1 Comp. Written exam graded	1	1	Seminar*	ntroduction
3 Comp.	3	3	Clinical practical*	Case studies: Clinical practical
al Focus Area Evolutionary Medicine I	Focus /	actical	Research Pra	Practical Evolutionary Medicine I
Status Admission Credit points/work in hrs			Duration	In which semester
			1 semester	2nd semester
Elec comp. MolBio passed 6/ 180		Con-	Type of	Component
comp. MoiBio passed 6/ 180 - CP Status Type of examination Evaluation We	СР	tact hrs	instruction	
comp. MoiBio passed 6/ 180 - CP Status Type of examination Evaluation We		tact		Block practical research — Lab 1
requirements Elec comp. MolBio passed 5/150 Stunden CP Status Type of examination 1 Comp. 1 Comp. 3 Comp. Written exam graded Tocus Area Evolutionary Medicine I Status Admission Credit points/v	1 1 3	tact hrs 2 1	1 semester Type of instruction Lecture Seminar* Clinical practical* Research Properties	2nd semester Component Evolutionary medicine - ntroduction Case studies: Clinical practical Practical Evolutionary Medicine I In which semester

Focus areas II (continuation of area chosen in 2nd semester)

Inflammation II	Focus area I	nflamn	nation	II			
In which semester	Duration			Status	Admission requirements	Credit points/workload in hrs	
3rd semester	1 semester			Elec comp.	Inflammation I passed	11/ 330	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Clinical inflammation research: Project development	Practical course*	9	8	Comp.	Scientific essay + oral presentation (oral presentation in front	graded	
	Seminar*	1	2	Comp.	of progr. committee)		
Current affairs (joint seminar)	Seminar*	1	1	Comp.			
Longevity II	Focus area l	ongev	ity and	health r	esearch II		
In which semester	Duration			Status	Admission requirements	Credit points/workloa	
3rd semester	1 semester			Elec comp.	Longevity I passed	11/330	
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight
Ageing in humans: Project development	Practical course*	9	8	Comp.	Scientific essay + oral presentation (oral	graded	
	Seminar*	1	2	Comp.	presentation in front of progr. committee)	0	
Current affairs (joint seminar)	Seminar*	1	1	Comp.			
Oncology II	Focus area I	Vlaligna	ant dis	eases II			
In which semester	Duration			Status	Admission requirements	Credit points, in hrs	/workload
	1 semester				11/ 330		
3rd semester	1 semester			Elec comp.	Oncology I passed	11/ 330	
3rd semester Component	1 semester Type of instruction	Con- tact hrs	СР		Oncology I passed Type of examination	11/ 330 Evaluation	Weight
	Type of	tact	CP	comp.	Type of examination Scientific essay + oral presentation (oral		Weight
Component Malignant diseases in humans:	Type of instruction	tact hrs	<u>.</u>	Status	Type of examination Scientific essay + oral	Evaluation	Weight
Component Malignant diseases in humans: Project development	Type of instruction Practical course*	tact hrs	8	Status Comp.	Type of examination Scientific essay + oral presentation (oral presentation in front	Evaluation	Weight
Component Malignant diseases in humans: Project development Current affairs (joint seminar)	Type of instruction Practical course* Seminar*	tact hrs 9	8 2 1	Comp. Comp. Comp.	Type of examination Scientific essay + oral presentation (oral presentation in front of progr. committee)	Evaluation	Weight
Component Malignant diseases in humans: Project development Current affairs (joint seminar)	Type of instruction Practical course* Seminar* Seminar*	tact hrs 9	8 2 1	Comp. Comp. Comp.	Type of examination Scientific essay + oral presentation (oral presentation in front of progr. committee)	Evaluation	
Component Malignant diseases in humans: Project development Current affairs (joint seminar) Evolutionary Medicine II	Type of instruction Practical course* Seminar* Seminar*	tact hrs 9	8 2 1	comp. Status Comp. Comp. Comp. Wedicine	Type of examination Scientific essay + oral presentation (oral presentation in front of progr. committee)	Evaluation graded Credit points,	
Component Malignant diseases in humans: Project development Current affairs (joint seminar) Evolutionary Medicine II In which semester	Type of instruction Practical course* Seminar* Seminar* Focus area E Duration	tact hrs 9	8 2 1	comp. Status Comp. Comp. Comp. Wedicine Status Elec	Type of examination Scientific essay + oral presentation (oral presentation in front of progr. committee) II Admission requirements Evolutionary Medicine	Evaluation graded Credit points, in hrs	
Component Malignant diseases in humans: Project development Current affairs (joint seminar) Evolutionary Medicine II In which semester 3rd semester Component Evolutionary medicine: Project	Type of instruction Practical course* Seminar* Seminar* Focus area E Duration 1 semester Type of	tact hrs 9 1 1 Contact	8 2 1 nonary	comp. Status Comp. Comp. Comp. Status Elec comp.	Type of examination Scientific essay + oral presentation (oral presentation in front of progr. committee) II Admission requirements Evolutionary Medicine I passed Type of examination Scientific essay + oral presentation (oral	Evaluation graded Credit points, in hrs 11/ 330 Evaluation	/workload
Component Malignant diseases in humans: Project development Current affairs (joint seminar) Evolutionary Medicine II In which semester 3rd semester Component	Type of instruction Practical course* Seminar* Seminar* Focus area E Duration 1 semester Type of instruction Practical	tact hrs 9 1 1 Contact hrs	8 2 1 conary	comp. Status Comp. Comp. Comp. Status Elec comp. Status	Type of examination Scientific essay + oral presentation (oral presentation in front of progr. committee) II Admission requirements Evolutionary Medicine I passed Type of examination Scientific essay + oral	Evaluation graded Credit points, in hrs 11/ 330	/workload

Master's thesis 4th semester (carried out in focus area chosen)

Master	Preparation	Preparation of Master's thesis								
In which semester	Duration	Duration		Status	Admission requirements	Credit points/workload in hrs				
4th semester	1 semester	1 semester		Comp.	Scientific essay Focus Area II passed, all other modules concluded, 79 ECTS	30/900				
Component	Type of instruction	Con- tact hrs	СР	Status	Type of examination	Evaluation	Weight			
Master's thesis	Supervised research work	**	30	Comp.	Master's thesis	graded				

^{*} depends on individual project and need for supervisors' input; supervisors are available for individual advice or set appointments.