Compulsory modules Medical Life Sciences

MF-MedCompact	**Basics of medical science and terminology**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
1st + 2nd semester	2 semesters			Comp.[1]		6 / 180	
Component	**Type of instruction**	**Con-tact hrs**	**CP[2]**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Anatomy and histology – introduction (1st semester)	Lecture with integrated practical	4	3	Comp.	Written exam	passed	
Physiology introduction (2nd semester)	Lecture	3	3	Comp.			
Examination admission requirements: study interview in anatomy passed							
MF-IntroMed	**Clinical manifestations of diseases and their origin**						
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**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Basics of clinicial manifestations of diseases	Lecture	4	5	Comp.	Written exam	passed	
Medical examination course	Tutorial	1	1	Comp.			
MF-MolBio**	**Basics of molecular biology**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload**	
1st semester	1 semester			Comp.		9 / 270	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Basics of molecular biology	Lecture**	3	2	Comp.	Written exam	passed	
	Practical course**	5	6	Comp.			
Introduction of research groups	Retreat** (weekend)	2	1	Comp.			
Requirements for crediting CP: study interviews (start/end) in practical course passed, lab book signed by lab manager							
MF-MolPatho**	**Pathology**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
1st + 2nd semester	2 semesters			Comp.		6 / 180	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Basics of pathology (1st sem.)	Lecture**	3	3	Comp.	Oral exam (2nd sem.)	graded	
Basics of molecular patholgoy (2nd sem.)	Lecture**	1	1	Comp.			
	Seminar*	1	2	Comp.			
Examination admission requirements: short presentation in seminar							

***Module/module component exclusively conducted in English**
****Module/module component mostly conducted in English**

[1] Comp. = compulsory
[2] CP = credit points

MF-Immunology**	**Immunology**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
1st + 2nd semester	2 semesters			Comp.		5 / 150	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Introduction to immunology (1st sem.)	Lecture*	2	1	Comp.	Oral exam	graded	
Introduction to molecular immunology (2nd sem.)	Lecture*	2	1	Comp.			
	Practical**	3	3	Comp.			
Examination admission requirements: lab report on experiment signed by lab manager							
MF-PharmaTox	**Pharmacology and toxicology**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
1st + 2nd semester	2 semesters			Comp.		7 / 210	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Introduction to pharmacology (1st sem.)	Lecture	4	3	Comp.	Oral exam	graded	
Introduction to pharmacology (2nd sem.)	Lecture	4	4	Comp.			
MF-ScienceMethod **	**Scientific methods in medical research**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload**	
1st semester	1 semester			Comp.		5 / 150	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Introduction to medical statistics and evidence-based medicine	Lecture	2	3	Comp.	Written exam	passed	
	Tutorial	1	2	Comp.			
MF-HumGen	**Human genetics**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
2nd semester	1 semester			Comp.		5/ 150	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Basics of human genetics	Lecture	2	3	Comp.	Written exam	graded	
	Practical	2	2	Comp.			

MF-WritEng *	**Basics of scientific writing**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
3rd semester	1 semester			Comp.		3/ 90	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
English Scientific Writing/Presentation Techniques	Seminar	2	2	Comp.	Essay writing as homework	passed	
	Tutorial	1	1	Comp.			
MF-Studies **	**Scientific studies and biobanking**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload**	
3rd semester	1 semester			Comp.		3 / 85	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Designing and realizing scientific studies	Lecture	2	2	Comp.	Oral presentation	graded	
	Seminar**	1	1	Comp.			
MF-BioInfo**	**Bioinformatics**						
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**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Bioinformatics– basics and application	Lecture*	2	2	Comp.	Written exam	graded	
	Tutorial	2	2	Comp.			
	Seminar**	1	1	Comp.			
MF-Techno**	**Biomedical technologies**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload**	
3rd semester	1 semester			Comp.		3 / 85	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
New technologies in biomedical research	Lecture*	1,5	2	Comp.	Oral presentation	passed	
	Excursions	1,5	1	Comp.			

Elective-compulsory modules outside focus areas (choose 1 out of 3)

MF-EpiBio**	**Research approaches in nutritional epidemiology and cell biological techniques**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
2nd + 3rd semester	2 semesters			Elec.-comp.[3]		9 /270	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Basics of nutritional epidemiology (2.nd sem.)	Lecture	2	2	Comp.	Oral exam	graded	
	Seminar	1	1	Comp.			
Nutritional medicine (3rd sem.)	Lecture	2	2	Comp.			
	Clinical practical	1	1	Comp.			
Basics of signal transduction ***or*** Introduction to bioanalytics ***or*** Animal models in medical research ***or*** Barrierer functions: Molecular interaction Epithelium – environment (3.rd sem.)	Lecture*	2	2	Comp.			
Basics of signal transduction ***or*** Introduction to bioanalytics ***or*** Animal models in medical research ***or*** Barrierer functions: Molecular interaction Epithelium – environment (3.rd sem.)	Lab seminar*	2	1	Comp.			
Requirements for examination admission: oral presentation 3rd semester in Basics of signal transduction ***or*** Introduction to bioanalytics ***or*** Animal models in medical research ***or*** Barrierer functions: Molecular interaction Epithelium – environment							

[3] Elec.-comp.= elective-compulsory

MF-Imaging **	**Imaging and cell biological methods in biomedicine**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
2rd + 3rd semester	2 semesters			Elec.-comp.		9 /270	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Medical imaging diagnostics (2nd Sem.)	Lecture	3	2	Comp.	Oral exam	graded	
	Seminar	1	1	Comp.			
Medical imaging biomedical research (3rd sSem.)	Lecture	1	1	Comp.			
	Seminar	2	2	Comp.			
Basics of signal transduction ***or*** Introduction to bioanalytics ***or*** Animal models in medical research ***or*** Barrierer functions: Molecular interaction Epithelium – environment (3.rd sem.)	Lecture*	2	2	Comp.			
Basics of signal transduction ***or*** Introduction to bioanalytics ***or*** Animal models in medical research ***or*** Barrierer functions: Molecular interaction Epithelium – environment (3.rd sem.)	Lab seminar*	2	1	Comp.			
Requirements for examination admission: oral presentation 3rd semester in Basics of signal transduction ***or*** Introduction to bioanalytics ***or*** Animal models in medical research ***or*** Barrierer functions: Molecular interaction Epithelium – environment							

MF-CellBio**	**Cell biology in clinical research**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
2nd + 3rd semester	2 semesters			Elec.-comp.		9 /270	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Basics of cell biology in medical research (2nd sem.)	Lecture	1	1	Comp.	Oral exam	graded	
	Lab seminar	2	2	Comp.			
Basics of cell biology in medical research (3rd sem.)	Lecture	2	2	Comp.			
	Lab seminar	1	1	Comp.			
Basics of signal transduction ***or*** Introduction to bioanalytics ***or*** Animal models in medical research ***or*** Barrierer functions: Molecular interaction Epithelium – environment (3.rd sem.)	Lecture*	2	2	Comp.			
Basics of signal transduction ***or*** Introduction to bioanalytics ***or*** Animal models in medical research ***or*** Barrierer functions: Molecular interaction Epithelium – environment (3.rd sem.)	Lab seminar*	2	1	Comp.			
Requirements for examination admission: oral presentation 3rd semester in Basics of signal transduction ***or*** Introduction to bioanalytics ***or*** Animal models in medical research ***or*** Barrierer functions: Molecular interaction Epithelium – environment							

Focus area 2nd semester (choose 1 out of 5)

MF- Inflammation I**	**Focus area Inflammation I**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
2nd semester	1 semester			Elec.-comp.	MolBio passed	8 / 240	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Introduction to clinical inflammation research	Lecture	2	1	Comp.	Written exam	graded	
	Seminar*	1	1	Comp.			
	Practical**	3	3	Comp.			
Case studies in learning: Clinical practical course inflammation	Clinical practical	3	3	Comp.			
Requirements for crediting CP: lab book signed by lab manager							
MF- Ageing I**	**Focus area Ageing I**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
2nd semester	1 semester			WP	MolBio passed	8 / 240	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Ageing in humans – introduction to research of ageing	Lecture	2	1	Comp.	Written exam	graded	
	Seminar*	1	1	Comp.			
	Practical**	3	3	Comp.			
Case studies in learning: Clinical practical course in geriatrics	Clinical practical	3	3	Comp.			
Requirements for crediting CP: lab book signed by lab manager							
MF- Neurology I**	**Focus area Neurological diseases I**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
2nd semester	1 semester			Elec.-comp.	MolBio passed	8 / 240	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Neurological diseases in humans-introduction	Lecture	2	1	Comp.	Written exam	graded	
	Seminar*	1	1	Comp.			
	Practical**	3	3	Comp.			
Case studies in learning: Clinical practical course in neurology	Clinical practical	3	3	Comp.			
Requirements for crediting CP: lab book signed by lab manager							

MF- Oncology I**	**Focus area Malignant Diseases I**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
2nd semester	1 semester			Elec.-comp.	MolBio passed	8 / 240	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Malignant diseases in humans - introduction	Lecture	2	1	Comp.	Written exam	graded	
	Seminar*	1	1	Comp.			
	Practical**	3	3	Comp.			
Case studies in learning: Clinical practical course in oncology	Clinical practical	3	3	Comp.			
Requirements for crediting CP: lab book signed by lab manager							
MF- Evolutionary Medicine I**	**Focus Area Evolutionary Medicine I**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload**	
2nd semester	1 semester			Elec.-comp.	MolBio passed	8 / 240	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Evolutionary medicine - introduction	Lecture	2	1	Comp.	Written exam	graded	
	Seminar*	1	1	Comp.			
	Practical**	3	3	Comp.			
Case studies in learning: Clinical practical course	Clinical practical	3	3	Comp.			
Requirements for crediting CP: lab book signed by lab manager							

Focus area 3rd semester (Continuation of area chosen in 2nd semester)

MF- Inflammation II**	**Focus area Inflammation II**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
3rd semester	1 semester			Elec.-comp.	Inflammation I passed	10 / 300	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Clinical inflammation research: Project development	Practical**	8	7	Comp.	Scientific essay and oral presentation (only oral pres. in front of programme comm.)	graded	
	Seminar*	1	2	Comp.			
Current affairs (joint seminar of all focus areas)	Seminar*	1	1	Comp.			
MF- Ageing II**	**Focus area Ageing II**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
3rd semester	1 semester			Elec.-comp.	Ageing I passed	10 / 300	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Ageing in humans: Project development	Practical**	8	7	Comp.	Scientific essay and oral presentation (only oral pres. in front of programme comm.)	graded	
	Seminar*	1	2	Comp.			
Current affairs (joint seminar of all focus areas)	Seminar*	1	1	Comp.			
MF- Neurology II**	**Focus area Neurological diseases II**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
3rd semester	1 Semester			Elec.-comp.	Neurology I passed	10 / 300	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Neurological diseases in humans: Project development	Practical**	8	7	Comp.	Scientific essay and oral presentation (only oral pres. in front of programme comm.)	graded	
	Seminar*	1	2	Comp.			
Current affairs (joint seminar of all focus areas)	Seminar*	1	1	Comp.			

MF- Oncology II**	Focus area Malignant diseases II						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
3rd semester	1 semester			Elec.-comp.	Oncology I passed	10 / 300	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Malignant diseases in humans: Project development	Practical**	8	7	Comp.	Scientific essay and oral presentation (only oral pres. in front of programme comm.)	graded	
	Seminar*	1	2	Comp.			
Current affairs (joint seminar of all focus areas)	Seminar*	1	1	Comp.			
MF- Evolutionary Medicine II**	**Focus area Evolutionary Medicine II**						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
3rd semester	1 semester			Elec.-comp.	Evolutionary Medicine I passed	10 / 300	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Evolutionary medicine: Project development	Practical**	8	7	Comp.	Scientific essay and oral presentation (only oral pres. in front of programme comm.)	graded	
	Seminar*	1	2	Comp.			
Current affairs (joint seminar of all focus areas)	Seminar*	1	1	Comp.			

Master's thesis 4th semester

MF-Master***	Preparation of Master's thesis						
In which semester	**Duration**			**Status**	**Admission requirements**	**Credit points/workload in hrs**	
4th semester	1 semester			Comp.	Module focus area 3rd semester passed, 90 ECTS	30 / 900	
Component	**Type of instruction**	**Con-tact hrs**	**CP**	**Status**	**Type of examination**	**Evaluation**	**Weight**
Master's thesis	Supervised research work	†	30	Comp.	Master's thesis	graded	

† depending on individual project and need for supervisor's input; supervisors are available for individual advice or set appointments.

*** according to agreement with supervisor either in English or German