

Attachment 1: Learning spirals within the spiral curriculum for biochemistry in the BMM

Learning spirals within the spiral curriculum for biochemistry, their distribution across modules and number of assigned learning objectives. The learning objectives were assigned to individual classes by the respective teachers and subsequently aggregated for each module. The individual learning objectives vary in granularity, and their number does not correlate directly with teaching hours or number of content units.

Learning spirals		matter	chemical reactions	nucleotides	nucleic acids	carbohydrates	lipids	proteins	enzymes	cytoskeleton	extracellular matrix	signalling	cell cycle/ cell death	energy metabolism	biochemical laboratory	gastrointestinal tract	liver	kidney	blood	immune system	muscles	bones, cartilage	skin	nervous system
Sem	Module																							
1	Movement	4	4	1	1	2	1	3	2		3	2		1		1		1				2		1
	Cardiovascular System		3		1		3	3	3			1		4		3	2		1					
2	Respiration	1	1																					
	Blood	3	3	2	3	2	2	5	3	2	2	2	1	2	1	1	1		8	1				
	Nutrition/Digestion/ Metabolism		2	2		6	7	6	5			5		6		3	6	2	2		3			
3	Nervous System			1			1	2	1			2												2
	Inflammation/Immune Response	3	2	3	6		7	14	8	1	1	6	7		3			1	2	10			1	
4	Kidney		2			1	2	2	1			2		1		2	1	4	4			1	1	
	Experience and Behaviour					2	2	1				2		2		2	2		2	2	2			2
5	Hormones/Sexual Organs/Sexuality	2	3	2	5	4	5	5	3	1		9	8	4	1	4	4	3	5	1	5	5	5	6
7	Clinical Reasoning and Decision Making			1	1		1		1				1			1	1	1	1			1	1	
8	Obstetrics and Gynaecology				1			1				2	3						1	1		1	1	2
	Paediatrics				1	2	1	1	2			2	1	1			1	1	3	1			1	
10	Geriatrics				1	1	1	1				1	1	1						1				

Sem: Semester