

**Parasitology (theory) (10 hours)**

**Helminthology**

Subject	Details	Duration	Lecturer / Instructor
Nematode	Ascaris lumbricoides Enterobius vermicularis Trichuris trichura Hook worms Strongyloides stercoralis	2 hours	Mitra Zarebavani
Cestoda	Taenia saginata Taenia solium Echinococcus granulosus Hymenolepis nana	1 hours	
Trematode	Fasciola hepatica Dicrocoelium dendriticum Schistosoma haematobium	1 hours	

**Protozoology**

Subject	Details	Duration	Lecturer / Instructor
Sarcodina	Pathogenic, nonpathogenic and Free living amoeba	2 hours	
Mastigophora	Intestinal mastigophora (Giardia lamblia,) Urogenital mastigophora (Trichomonas vaginalis) Tissue mastigophora (Leishmania spp)	1 hours	Mitra Zarebavani
Apicomplexan	Toxoplasma gondii Sarcocystis spp. Isospora belli Cryptosporidium spp. Cyclospora cayetaenensis Plasmodium spp.	3 hours	

**Parasitology (practical)**

Subject	Details	Duration	Lecturer / Instructor
Techniques	Formol-ether concentration method Sheather's sucrose method Staining methods	4 hours	Mitra Zarebavani
Demonstration of slides	Helminths and protozoans	4 hours	

**Biochemistry (theory) (12 hours)**

Subject	Details	Duration	Lecturer / Instructor
liver		2 hours	Nahid Einollahi Fariba Nabatchian Nasrin Dashti
Kidney		2 hours	
Heart and biomarkers		2 hours	
Clinical enzymology		2 hours	
Biological fluids		2 hours	
hormones		2 hours	

**Biochemistry (practical)**

Subject	Details	Duration	Lecturer / Instructor
Clinical enzymology		2 hours	Nahid Einollahi Fariba Nabatchian Nasrin Dashti
Elisa		2 hours	
ECL		2 hours	
TDM		2 hours	
Chromatography		2 hours	
Electrophoresis		2 hours	

**Microbiological (Theory) (12 hours)**

Subject	Details	Duration	Lecturer / Instructor
Micrococaceae family		2hrs	Monireh Rahimkhani
Streptococaceae family		2hrs	
Gram positive bacilli non spore forming		2hrs	
Gram positive bacilli spore forming (aerobic & nonaerobic)		2hrs	
Enterobacteriaceae family		2hrs	

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Sterilization methods & disinfectant components		1hr	
Helicobacter & Campylobacter & Mycoplasma		2hrs	
Legionella & Chlamydia		1hr	

**Microbiology (practical) (10 hours)**

Subject	Details	Duration	Lecturer / Instructor
Detection of Staphylococcus & micrococcus		2hrs	Monireh Rahimkhani
Detection of Streptococacea family		2hrs	
Methods of urine culture	Pourplate method & Streaking method	2hrs	
	staining methods	2hrs	
Detection of Entrobacteriaceae family by IMVIC method		2hrs	
Detection of Listeria & corynebacterium		1hr	
Slide demonstration	(Bacillus, Chelostidium, Mycobacterium, Neisseria, Brucella)	1hr	

**Immunology & Serology (theory) (8 hours)**

Subject	Details	Duration	Lecturer / Instructor
Structure of antibody (Ab) and antigen (Ag)		3 hrs	Mehdi Zavvar
Immune cells and lymphatic organs		3 hrs	
Immunotherapy	Tray cell therapy	2 hrs	

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**Immunology & Serology (practical) (8 hours)**

Subject	Details	Duration	Lecturer / Instructor
Neutrophil oxidative burst assay (NBT)		2 hrs	Mehdi Zavvar
Complement dependent Cytotoxicity (CDC)		2 hrs	
Mixed lymphocyte reaction (MLR)		2 hrs	
Florescence Anti-Nuclear Antibody assay (FANA)		2 hrs	

**Hematology (Theory) (14 hours)**

Subject	Details	Duration	Lecturer / Instructor
Principals hematology & Haematopoesis		1hr	Shaban Alizadeh
RBC disorders		2hrs	
Leukocyte benign & malignant disorders		4hrs	
Haemostasis & Thrombosis & related disorders		2hrs	
Blood Donation		1hr	
Immune Hematology techniques		2hr	
Transfusion medicine		2hr	

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**Hematology (practical) (12 hours)**

Subject	Details	Duration	Lecturer / Instructor
Hematomorphology & CBC	-	3 hrs	Shaban Alizadeh
Other routine tests in hematology	-	4 hrs	
Coagulation tests	-	2 hrs	
Transfusion related tests	DAT IAT Cross match Blood typing & iscrepancies	3hrs	