**Time table of Biology**

For 1st year of the Faculty of Dentistry

**Seminars and lab exercises**

Academic year 2022-2023

**Unit 1 KK**

**Seminar:** Parasitism and its concepts Part 1; symbiosis and its types (e.g. parasitism); examples of parasitic organisms in taxonomical arrangement (biology, ecology, morphology, and epidemiology of most important parasite species, opportunistic parasites.

**Exercise:** Microscopic techniques

**Unit 2 KK**

**Seminar:** Parasitism and its concepts Part 2; symbiosis and its types (e.g. parasitism); examples of parasitic organisms in taxonomical arrangement (biology, ecology, morphology, and epidemiology of most important parasite species, opportunistic parasites.

**Exercise:** Morphology of parasites: Protista: *Trichomonas vaginalis, Trichomonas tenax, Giardia lamblia*

**Unit 3 KK**

**Seminar and Exercise:** Morphology of parasites: Protista (Amoebae and Apicomplexans): *Entamoeba gingivalis, Entamoeba histolytica, Plasmodium vivax, Toxoplasma gondii, Trypanosoma gambiense, Trypanosoma cruzi*

**Unit 4 EK/KK**

**Seminar:** Range of tolerance and essential and non-essential elements, including xenobiotics

**Exercise:** Morphology of parasites: Flatworms: Digeneans: *Schistosoma haematobium;* Tapeworms (Cestoda): *Taenia solium, Taenia saginata, Echinococcus granulosus*

**Unit 5 EK/KK**

**Seminar:** Human ecology

**Exercise:** Morphology of parasites: Roundworms: Nematodes: *Ascaris lumbricoides Trichinella spiralis, Enterobius vermicularis, Trichuris trichiura*

**Unit 6 EK/KK**

**Seminar:** Human biology. Length of human life. Organism and population ageing (Part 1)

**Exercise:** Morphology of parasites: Arthropods: Ticks: *Ixodes Ricinus;* Mites: *Demodex folliculorum, Sarcoptes scabiei;* Insects: *Pediculus humanus, Phtirus pubis, Pulex irritans, Cimex lectularius*

**Unit 7 KK**

**Test (classes 2-6) and parasite identification of slides**

**Seminar:** Cell cycle: sexual reproduction; cell division in prokaryotes, cell division in eukaryotes.

**Exercise:** Mitosis. Meiosis. Gametogenesis: oogenesis and spermatogenesis. Hormonal regulation of oogenesis and spermatogenesis in human.

**Unit 8 EK/KK**

**Seminar:** Human biology. Length of human life. Organism and population ageing (Part 2)

**Exercise:** Human genome nuclear genomes and mitochondrial genome. Mitochondrial diseases/disorders, gene concept, coding and non-coding DNA. Inheritance patterns, Antigens associated with red blood cells, blood types/blood groups (AB0, MN, Rh systems)

**Unit 9 KK**

**Exercise:** Chromosome structures in prokaryotes and eukaryotes. Human chromosome types. Chromosomes X and Y. Cytogenic diagnostics methods. Karyotype: normal and abnormal. Chromosome aberrations: Down, Turner and Klinefelter syndromes. Kariotype preparations and chromosome bending techniques and their importance in cytogenic diagnostic.

**Exercise:** Disorders based on autosomal, dominant, autosomal recessive, and X-linked mutations. Theoretical genetic exercises.

**Unit 10 EK/KK**

**Test (classes 9-12)**

**Seminar and Exercise:** Students presentations (toxicology and parasitological subjects)