PRACTICAL COURSE IN BIOLOGY **for English-speaking <u>medical and dental</u> students – 2nd semester**	
Time	**Practical**
1st week	For **medical** students: Comparative anatomy III: Cranium (skull). For **dental** students: Teeth and chewing apparatus.
2nd week	Chromatin and chromosomes. Giant chromosomes in larvae of dipteran insects. Barr body in oral mucosa cells.
3rd week	Cell cycle. Mitosis.
4th week	Karyotype. Normal human karyotype. ***Please bring scissors for paper.***
5th week	Meiosis. Gametogenesis.
6th week	Fertilization. *In vitro* fertilization in a mouse model.
7th week	Embryonic development in echinoderms and vertebrates: cleavage, gastrulation, neurulation.
8th week	Cells and organs involved in immune response. Lymphocytes, phagocytes. Preparation and evaluation of lymphocyte suspensions.
9th week	Human alloantigens. ABO and Rhesus blood group systems. Blood group testing. Blood group inheritance.
10th week	Immunological methods. Agglutination: serum titration. Precipitation: ring test, Ouchterlony test. ELISA.
11th week	Mendelian inheritance. Morbid risk. Solving genetic problems.
12th week	Methods in population genetics: qualitative traits. Phenotype, genotype and gene frequencies. Hardy – Weinberg law.
13th week	Mutation frequency. Natural selection. Migration. Isolation. Kinship and inbreeding coefficients.
14th week	**COLLOQUIUM WITH PROBLEMS.**
15th week	Methods in population genetics: quantitative traits.

This schedule is valid from academic year 2016-17 onwards.