Syllabus
Pathological Physiology 2
Summer Semester 2022/2023
Week 1

General Medicine

1. **Lecture**
   - Dysrrhythmias – etiopathogenesis, genetics, classification, electrophysiology,
   - Cardiomyopathy - types, etiopathogenesis, classification, inborn and acquired forms
   - Heart failure - definition, classification and stages, compensation
2. **Seminars**
   - T: Introduction to CVS pathophysiology
   - S: Atherosclerosis - etiology, risk factors, pathogenesis and genetics, endothelial dysfunction, manifestations
     Ischemic vascular disease – coronary artery disease and peripheral artery disease - etiopathogensis, classification, manifestations
   - Semester work consultations

Dental Medicine

1. **Lecture**
   - Dysrrhythmias – etiopathogenesis, genetics, classification
   - Cardiomyopathy - types, etiopathogenesis, classification, inborn and acquired forms
   - Heart failure - definition, classification and stages, compensation
2. **Seminars**
   - T: Introduction to CVS pathophysiology
   - S: Valvular disorders: Classification – mitral and aortic; stenosis or insufficiency; etiology, hemodynamic changes, clinical signs, complications, application in dentistry
     Congenital heart disorders. Classification – with cyanosis and without cyanosis; etiology, hemodynamic changes, clinical signs, complications, application in dentistry
   - Semester work consultations

Seminars (S) = special topics for discussion; **Tutorials & homeworks & exams (T)** = discussions, consultations, oral and quiz exams on the current topics.

Note: The range of topics and their timetable during the tutorials and seminars in each group is determined by the teacher and to a large extent, by the presentations, consultation interests, questions and readiness of the group and may vary in between groups. Neither tutorials nor seminars are lectures, but dialogue and discussion and thus require an active participation and preparation of students for the topics.

Recommended audiovisual materials
Dysrrhythmias
- Electrocardiography (ECG/EKG) – basics https://www.youtube.com/watch?v=xIZQRjkwV9Q
- Electrical Conduction System of the Heart –https://www.youtube.com/watch?v=_GM-g6YIzYI
- Cardiac Action Potential, Animation - https://www.youtube.com/watch?v=v7Q9BrNfIpQ
- Myocardial Action Potential: animation video – https://www.youtube.com/watch?v=L2Gf9cj7jBw
- Supraventricular arrhythmias: Pathology review - https://www.osmosis.org/learn/Supraventricular_arrhythmias:_Pathology_review
- Ventricular arrhythmias: Pathology review - https://www.osmosis.org/learn/Ventricular_arrhythmias:_Pathology_review

Heart failure
- Congestive Heart Failure - https://www.youtube.com/watch?v=ypYI_ImLD7g

Cardiomyopathy

- Cardiomyopathy Overview - types (dilated, hypertrophic, restrictive), pathophysiology and treatment - https://www.youtube.com/watch?v=QC7qwTyH6uM
- Hypertrophic cardiomyopathy - signs and symptoms, causes, pathophysiology, treatment - https://www.youtube.com/watch?v=Lqn71jvMhQM
- Dilated Cardiomyopathy - causes, symptoms, pathophysiology and treatment - https://www.youtube.com/watch?v=1bRAHYe9GcU
- Takotsubo Cardiomyopathy (Broken heart syndrome) - pathophysiology, diagnosis and treatment - https://www.youtube.com/watch?v=d15kbYySnoY