

Subject: <b>Pathological physiology 1</b>	Subject type:	<b>Compulsory /---</b>
Study year: 3rd	Content:	<b>2/2 winter time</b>
Study program: <b>Dental Medicine</b>		

## **Aim of the course**

Since its beginning Department of Pathophysiology provided organizational support and content of pre-graduate subject **Pathological Physiology** for General Medicine and Dentistry. Within the European tradition Pathophysiology is the essential part of pre-clinical medical education, providing a systematic review of the scientific basis for the emergence and development of the disease, symptoms (Nosology), contemporary overview of the causes and risk factors (etiology) of human diseases, mechanisms of progression and development of the clinical expressions (pathogenesis), including molecular and cellular processes and changes during different pathophysiological processes and diseases.

Subject is placed to the 3rd year of study and has prerequisite condition (Physiology 2). It is important part of knowledge of future physician, because it connects pre-clinical and clinical subjects and it gives important informations for understanding of internal medicine and other clinical disciplines.

**Education:** lectures/seminars 2/2

**Assessment:** credit (2 written tests)

## **Syllabus**

### **Week 1**

**Oral health I.** Physical & chemical lesions and reactive changes in the oral cavity.

### **Week 2**

**Etiology I.** Mendelian, non – mendelian genetics. Genetics in dentistry.

### **Week 3**

**Etiology II.** Disorders of nutrition in dentistry (incl. obesity, malnutrition, avitaminoses).

### **Week 4**

**Etiology III.** Disorders of inner milieu (water, electrolytes; calcium, phosphates).

### **Week 5**

**Pathogenesis I.** Microcirculatory failure. Shock, MODS, DIC (hypercoagulation).

### **Week 6**

**Pathogenesis II.** Typical pathol. processes: Pain, Fever, Ischemia, Hypoxia.

### **Week 7**

**Pathogenesis III.** Acute inflammation.

### **Week 8**

**Pathogenesis IV.** Chronic inflammation; SIRS; Sepsis; MODS.

**Week 9**

**Pathogenesis V.** Immunopathology.

**Week 10**

**Pathogenesis VI.** Tumors - biology; molecular genetics.

**Week 11**

**Pathogenesis VII.** Stress & maladaptation; Cellular stress.

**Week 12**

**Pathogenesis VIII.** Disorders of consciousness. Terminal states.

**Week 13**

**Oral health II.** Disorders of oral cavity (caries, periodont., red & white lesions etc.).

**Week 14**

**Oral health III.** Typical path. processes in oral medicine; Ontogenesis in oral cavity.