# Nutrition Biochemistry - P (CBICV-P - WS)

**1. Basic concepts** (allowance 3/0)
a. Overview of physiology of digestion (diagram)
b. Digestive system and its operation
c. Mechanisms of resorption, resorptive capacity

**2. Metabolism and energy balance** (allowance 4/0)
a. Transformation of substances and energy
b. Energy yield of food
c. Energy expenditure, control of food intake

**3. The internal environment of the organism** (allowance 4/0)
a. Replacing minerals and water
b. Biochemistry of the internal environment
c. Acid-Base Balance

**4. Liver and kidneys** (allowance 3/0)
a. Biochemistry of liver cells
b. Biochemistry kidney.

**5. Tissues** (allowance 3/0)
a. Biochemistry of nervous tissue and vision
b. Biochemistry of muscle tissue
c. Biochemistry of the skin

**6. Enzymes** (allowance 4/0)
a. Construction, activation, inhibition
b. Determination of enzymes
c. Michaelis constant

**7. Hormones** (allowance 4/0)
a. Determination of hormones
b. Thyroid hormones, gonadal hormones

**8. Amino acids** (allowance 4/0)
a. General characteristics of amino acids and amino acid structure
b. Metabolism of amino acids
c. Determination of amino acids, isoelectric point

**9. Metabolism** (allowance 4/0)

a. The method of examination metabolism in blood and urine for protein, urea, creatinine, uric acid, amino acids, lipoproteins, cholesterol, triacylglyceridů, lipoproteins, carbohydrates, glucose, bilirubin, hemoglobin, mineral elements.

**10. Description of the basic principles of methods** (allowance 4/0)

a. PCR, chromatographic methods, electrophoretic methods

b. Spectroscopic methods, immunochemical methods

c. Electrochemical Methods

**11. Composition and stool examination** (allowance 4/0)

a. Chemical, macroscopic and microscopic examination

**12. The composition and examination of gastric and duodenal juices** (allowance 3/0)

a. Chemical, macroscopic and microscopic examination

b. Examination of gastric acidity, alkalimetrie, evidence of lactic acid