

Class schedule for ERASMUS

Name of the class: Enzymology and protein chemistry

Class dates:

- 6.10.2025
- 22.10.2025
- 12.11.2025
- 01.12.2025

Seminars

S1 Introduction to enzymology, basic properties of enzymes. Nature of enzymes. Properties of enzymatic proteins. Chemistry and functions of enzymes in the cell

16.10.2025 (J. Wawszczyk)

S2 Classification and nomenclature of enzymes. Structure and function of coenzymes. Enzyme catalyzed reaction

16.10.2025 (J. Wawszczyk)

S3 Basics of enzyme kinetics: Michaelis Menten equation and its transformation (Lineweaver–Burk plot). Influence of temperature and pH on enzymatic reactions. Inhibition of enzymes. Reversible and irreversible inhibitors.

(S.Smolik)

S4 Mechanisms of enzyme-catalyzed reaction. Regulatory enzymes. Regulation of enzymatic action. Ribosomes and abzymes.

12.11.2025 (J. Wawszczyk)

S5 Databases for enzymes. Identification of bioactive compounds with the use of computational methods

(S.Smolik)

Laboratory classes

C1 Methods of separation and quantitative determination of proteins.

22.10.2025 (S. Smolik)

C2 Determination of succinate dehydrogenase activity in liver homogenate using artificial electron acceptor. Determination of oxidoreductase activity of enzymes from potato extract

16.10.2025 (J. Wawszczyk)

C3 Practical use of the Warburg test to determine the activity of enzymes (alanine and aspartate aminotransferase, alcohol dehydrogenase) and determination of glucose concentration using the hexokinase method. Use of enzymes in clinical diagnostics, biotechnology, pharmaceutical and food industries.

1.12.2025 (J. Wawszczyk)

C4 Kinetic properties of human invertase.

(S. Smolik)

C5 Target and ligand fishing web tools Automated docking tools LADME prediction

(S. Smolik)