

Course name: Biochemistry (USOS Code: B-BM.062Eng)

ECTS: 8

No. of hours: 90 (30 lectures + 60 classes)

Course coordinator: Dr Justyna Sulej

Prerequisites: Completed course in The elements of organic chemistry for biology students

Course description: This course provides an overview of the main aspects of biochemistry focuses on structure, systematics, function and basics of metabolism of the biological macromolecules including the amino acids, proteins, enzymes and their cofactors, carbohydrates, lipids, non-amino acid nitrogen compounds and nucleic acids. Topics will include the regulation of metabolism and gene expression. Included also will be the fundamentals of enzymes/proteins spatial structure and function. Basics of cofactors and vitamins. Basics of biochemistry of biological membranes, including transport and cell signaling. Routes and location of primary and indirect metabolism. Basics of integration and regulation of basic and indirect metabolism.

Recommended literature: Pratt C.W. and Cornely C. Essential biochemistry. Hoboken, John Wiley & Sons, Inc., 2014; Voet D.J., Voet J.G., Pratt C.W., Principles of Biochemistry, 5th global ed., John Wiley & Sons, Inc., 2018; Berg, Tymoczko, Stryer, Biochemistry, New York: W.H. Freeman and Company, 2012.