

BIOCHEMISTRY I

Study programme: MIMV Curricular Year: 1st Semester: 1st Compulsory ECTS: 4.0

Lecturers: José A. Mestre Prates (CCP e R), Pedro Bule Gomes, Mário A. Gonçalves Quaresma

1. Contact hours:

Lectures – 28, Practicals – 28, Total – 56

2. Objectives:

Learning of the general concepts and fundamentals of structural biochemistry and catalysis required to the understanding at molecular level of biological phenomena occurring in Veterinary Sciences.

3. Programme:

3.1. Theoretical: Biochemistry foundations. Structure and properties of water. Structure of amino acids, peptides and proteins. The three-dimensional structure of proteins. Protein function. Enzymes and catalysis. Regulatory enzymes. Structure of carbohydrates. Glycobiology. Structure of lipids. Biological membranes and transport.

3.2. Practical: Basic techniques. Electrophoretic techniques. Spectrophotometric techniques.

4. Bibliography:

1. PRATES, J. A. M. et al. (2023) - Texto de Apoio das Aulas Teóricas da Disciplina de Bioquímica I. Edição de 2023/24 & CD-ROM (Bioquímica I, FMV-UTL). Lisboa : Faculdade de Medicina Veterinária da Universidade Técnica de Lisboa. 160 p. Material fornecido aos Discentes da Disciplina.
2. PRATES, J. A. M. (2023) - Sumários e Protocolos Técnicos das Aulas Práticas da Disciplina de Bioquímica I. Edição de 2023/24 & CD-ROM (Bioquímica I, FMV-UTL). Lisboa : Faculdade de Medicina Veterinária da Universidade Técnica de Lisboa. 40 p. Material fornecido aos Discentes da Disciplina.
3. NELSON, D. L. e COX, M. M. (2021) - Lehninger Principles of Biochemistry. 5th edition & CD-ROM (Understand! Biochemistry). New York : W. H. Freeman and Company. ISBN 0716743396.
4. OSGOOD, M. e OCORR, K. (2018) - The Absolute, Ultimate Guide to Lehninger Principles of Biochemistry: Study Guide and Solutions Manual. 5th edition. New York : W. H. Freeman and Company. ISBN 0716759551.

5. Assessment:

Theoretical: written examination (75% of final classification). Practical: written examination (25% of final classification).