

Course:	L025 - Food Quality and Nutrition
Degree:	Bachelor
Curriculum Unit:	9000005 - Biochemistry
Scientific field:	Chemical Sciences
ECTS^(*):	5
Curriculum year:	1st
Curriculum semester:	2nd
Frequency Regime:	Mandatory
Teacher(s):	Maria João da Cunha e Silva Reis Lima
Contact hours ^(**):	T - 30; TP - 30
Total work time (hours):	132

(*) - ECTS - European Credit Transfer and Accumulation System

(**) – T- Theoretical; TP- Theoretical/Practical; LP- Lab Practice; S- Seminars; I- Internships; TU - Tutorials; O- Other (Evaluations)

Objectives / Competences

In this curricular unit, students should obtain the same objectives as in a biochemistry curricular unit. To understand the structure and specificity of each organic biomolecule; To analyze cycle diagrams and aptly explain them; To explain biosynthesis and degradation of the macromolecules.

Syllabus

Characteristics of biochemical reactions. Metabolism.

Chemical composition of living matter. Molecular components of cells.

Water.

Carbohydrates: Structure, classification and representation. Lipids: Structure, classification and representation.

Proteins: Structure, classification and representation

Teaching methodologies and evaluation criteria

The syllabus is divided into two parts taught in theoretical and practical classes. There will be a written exam to assess the practical part. The final mark will result from the written exam (85%), together with reports which will total 6 points (out of 20). The student must obtain a minimum grade of 3 with respect to the practical part. The re-sit to better a mark is allowed in accordance with the current regulation practiced at ESAV.

Short bibliography

CAMPOS, L. S. Entender a Bioquímica. Escolar Editora. 1998.

ELLIOT, W.H.; ELLIOT, D.C. Biochemistry and Molecular Biology. Oxford University. 1997.

LEHNINGER, A. L. Bioquímica - Vol.I e II. Vertente. Edição atualizada.

LEHNINGER, A.L., NELSON, D.L. e Cox, M. M. Principles of Biochemistry. Worth Publishers. 1993. STRYER, L.; TYMOCZKO, J.; BERG, M. J.; 5ª edição, Editora Guanabara.

QUINTAS, A FREIRE, HALPERN, MJ, Bioquímica- Organização Molecular da Vida, Lidel, 2008.