

<b>ID</b>	2228
<b>Curricular Unit</b>	Introduction to Biochemistry
<b>Regent</b>	Cristina Bento
<b>Learning Outcomes</b>	Basic education in biochemistry, in the perspective of the study of the molecular phenomena underlying the structure and function of the biological systems focussing on the biomolecular processes related to human movement.
<b>Syllabus</b>	<p>After a brief summary on the evolution of Biochemistry, the following subjects are developed: elementary composition of the human body; macro, micro and trace elements, their nutritional importance and influence on motricity; basic notions on organic and inorganic chemistry; basic notions on chemistry and physics in Biochemistry; enzymology; bio molecules: structure, function and preventive nutrition of carbohydrates, lipids, proteins and nucleic acids.</p> <p>Metabolism of carbohydrates, lipids and proteins at rest and during exercise; sequential usage of substrates and limiting factors of physical performance; hormonal response to exercise; physiological integration of biochemical metabolisms. Oxygen free radicals in exercise.</p>
<b>Evaluation</b>	<p>Final Examination.</p> <p>Written test (90 minutes), covering all the contents (lectures and lecture/practicals classes).</p> <p>Students with results between 8 and 9 submit to oral examination.</p>
<b>Bibliography</b>	<p>Laires, M.J. (2006). Bioquímica, Faculdade de Motricidade Humana.</p> <p>Stryer, L. (1988). Biochemistry. 3<sup>a</sup> ed., W.H. Freeman and Company, New York, Bib. FMH n<sup>o</sup> 16907</p> <p>Devlin, T.M. (1986). Textbook of Biochemistry with Clinical Correlations. Ed. Devlin, T.M., 2<sup>a</sup> ed., John Wiley and Sons, New York. Bib. FMH n<sup>o</sup> 16894</p> <p>Holm, J.R. (1986). Fundamentals of General Organic and Biological Chemistry. John Wiley and Sons, New York. Bib. FMH n<sup>o</sup> 17473</p> <p>Manso, C., Freire, A. &amp; Azevedo, M. (1986). Introdução à Bioquímica Humana, 3<sup>a</sup> ed., Fundação Calouste Gulbenkian, Lisboa. Bib. FMH n<sup>o</sup> 18843</p> <p>Newsholme, E.A. &amp; Leech, A.R. (1983). Biochemistry for the Medical Sciences. John Wiley and Sons, Bib. FMH n<sup>o</sup> 17110</p> <p>Rawn, D.J. (1989). Bioquímica, McGraw Hill. Interamericana de España. Vol I - Bib. FMH n<sup>o</sup> 18437; Vol II - Bib. FMH n<sup>o</sup> 18438</p> <p>Silva, J.A.M., Geada, H.M. &amp; Freire, A.M. (1979). Introdução à Bioquímica Médica. Fundação Calouste Gulbenkian, Lisboa.</p> <p>Weil, J. (1979). Bioquímica Geral, Fund. Calouste Gulben</p>