Code: QO551

Name: Bioquímica I

Name in English: Biochemistry I

Name in Spanish: Bioquimica I

Subject type: Weekly

Approval Type: Grade and Attendance

Characteristic: Offered in a regular basis

Frequency: 75%

Period Type / Offering period: Semester/ All periods

Requires Final Exam: Yes

Vectors

T	L	P	O	PE	OE	SL	WEEKS	CREDITS
4	**-**	**-**	**-**	**-**	**-**	**4**	**15**	**4**

Occurrence on curriculum: 05, 50, 56

Pre requirement: QO321 o QO323 o QO427

Summary: Introduction, amino acids, proteins: structure, methods for protein analysis, protein function, carbohydrates, nucleic acids, RNA and DNA structures, methods for analysis of nucleic acids, principle of recombinant DNA technology, lipids and biological membranes, membrane transport, enzymology, selected topics.

Program:

Introduction
Amino Acids
Proteins: Structure
Methods for Protein Analysis
Protein Function
Carbohydrates
Nucleic Acids, RNA and DNA Structure
Methods for Analysis of Nucleic Acids
Principle of Recombinant DNA Technology
Lipides and Biological Membranes
Membranes Transport
Enzymology
Selected Topics

Basic Bibliography

1) NELSON, D. L.; COX, M.M. Princípios de bioquímica de Lehninger 7. ed. Porto Alegre, RS : Artmed, 2019.
2) VOET, D.; VOET, J. G. Biochemistry 4. Ed. New York, NY : John Wiley & Sons : Wiley, 2011. 1428 p.
3) BERG, J.; TYMOCZKO, J.; STRYER, L.; Biochemistry, 5 Ed., New York, NY : W. H. Freeman, 2002. 978 p

Supplementary Bibliography

1) LODISH, H.; et al.; Biologia celular e molecular, 7 Ed., Porto Alegre, RS : Artmed, c2014. 1210 p.
2) HENRICKSON, C. H.; BYRD, L. C.; HUNTER, N. W. A laboratory manual for general, organic, & biochemistry , 6 Ed., Boston, MA : McGraw-Hill, 2008. 439 p
3) HARPER; Harper's illustrated biochemistry, 27 Ed. New York, NY : Lange Medical Books/McGraw-
Hill, 2006. 692 p.
4) VAN HOLDE, K. E.; JOHNSON, W. C.; HO, P. S. Principles of physical biochemistry, 2 Ed. Upper

Saddle River, NJ : Pearson/Prentice Hall, 2006. 710 p.
5) HATTI-KAUL, R.; MATTIASSON, B. Isolation and purification of proteins. 1 Ed. Boca Raton, FL : CRC/Taylor & Francis, 2003. 652 p.