



UNIVERSIDADE ESTADUAL DE MARINGÁ
PRÓ-REITORIA DE PESQUISA E PÓS-GRADUAÇÃO

PROGRAMA DE DISCIPLINA

Curso:	PROGRAMA DE PÓS-GRADUAÇÃO EM BIOQUÍMICA		
Departamento:	Bioquímica - DBQ		
Centro:	Ciências Biológicas - CCB		
COMPONENTE CURRICULAR			
Nome da Disciplina: Principles of Biochemistry		Código: DBQ4113	
Tipo: Eletiva			
Carga Horária Teórica: 30h	Carga Horária Prática: 0h	Carga horária total: 30h	
Nº de créditos teóricos: 2	Nº de créditos práticos: 0	Nº total de créditos: 2	
Nível: Mestrado e doutorado			
Ano de Implantação: 2019			
Idioma em que a disciplina será oferecida: Inglês			
1. EMENTA			
Structure, function, and metabolism of the main biomolecules.			
2. OBJETIVOS			
To use English as a tool to teach Biochemistry. To familiarize the graduate student with the most common English concepts in biochemistry.			
3. CONTEÚDO PROGRAMÁTICO			
1. Water. pH and buffers. 2. Amino acids and proteins. Structure and function. 3. Enzymes. 4. Carbohydrates. Structure and function. 5. Lipids. Structure and function. 6. Nucleotides and nucleic acids. Structure and function. 7. Membranes. Structure. Transport across membranes. 8. Biosignaling. 9. Bioenergetics. 10. Carbohydrates metabolism. 11. Citric acid cycle. 12. Electron transport and oxidative phosphorylation. 13. Lipid metabolism. 14. Metabolism of amino acids and nucleotides.			

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| 15. DNA metabolism.
16. RNA metabolism.
17. Protein metabolism.
18. Gene expression regulation. |
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4. REFERÊNCIAS

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| <ul style="list-style-type: none">• Alberts B, Johnson A, Lewis J, Morgan D, Raff M, Roberts K, Walter P. Molecular biology of the cell. 6th Edition. New York: Garland Science, 2014.• Berg JM, Tymoczko JL, Stryer L. Biochemistry Stryer. 7th edition. New York: W. M. Freeman Company, 2012.• Campbell MK, Farrell SO, McDougal OM. Biochemistry. Boston: Cengage Learning, 2018.• Mathews C.K., van Holde KE, Appling DR, Anthony-Cahill SJ. Biochemistry. London: Pearson, 2013.• Nelson DL, Cox MM. Lehninger principles of biochemistry. 7th edition. São Paulo: New York, Macmillan Learning, 2017.• Rodwell VW, Bender DA, Botham KM, Kennelly PJ, Weil PA. Harper's illustrated biochemistry. 30th edition. New York: Lange, 2015.• Voet D, Voet J. Biochemistry. Fourth edition. New Youk: Wiley, 2010. |
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5. PROFESSOR RESPONSÁVEL (PROFESSORES RESPONSÁVEIS)
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Profa. Ione Parra Barbosa Tessmann

APROVAÇÃO DO CONSELHO ACADÊMICO