



FEDERAL UNIVERSITY OF CEARÁ
Provost Office of Research and Graduate Studies

COURSE PROGRAM

1. PROGRAM:		
Program	GRADUATE PROGRAM IN CHEMISTRY	
2. COMPONENT TYPE:		
Activity ()	Course (X)	Module ()
3. LEVEL:		
Master's Degree (X)		Doctorate (X)
4. COMPONENT IDENTIFICATION:		
Name:	BIO-ORGANIC CHEMISTRY	
Code:	CEP7133	
Hours:	64h	
Credits:	04	
Optional course:	Yes (X)	No ()
Compulsory course:	Yes ()	No (X)
Area:	-	
5. PROFESSOR:		
6. ABSTRACT:		
7. COURSE PROGRAM:		
Origin of Natural Organic Substances. Main biosynthesis pathways. Primary Metabolites. Polycetides: fatty acids, acetylenic compounds, prostaglandins, macrolides, phenols, triterpenes, steroids, carotenoids. Shikimides: cinnamic acid, propenyl and allylphenols, lignins, and neolignins. Polyketichiquimids: pyrones, stilbenes, flavonoids and neoflavonoids. Biosynthesis of alkaloids derived from aliphatic and aromatic amino acids.		
8. EVALUATION PROCESS:		
Frequency of 75% or more		
9. BIBLIOGRAPHY:		
1. Walsh, C. T., Tang, Yi. Natural Product Biosynthesis: Chemical Logic and Enzymatic Machinery, Royal Society of Chemistry Press. CPI Group (UK) Ltd. 2017. 2. Dewick, P. M. Medicinal Natural Products: A Biosynthetic Approach. 3rd ed., John Wiley & Sons Ltd. 2009. 3. Lobo, A. M., Lourenço, A. M. Biossíntese de Produtos Naturais, IST Press, Lisboa, Portugal, 2007. 4. Mann, J. Chemical Aspects of Biosynthesis. Oxford University Press, 2002. 5. Luckner, M. Secondary Metabolism in Microorganisms, Plants, and Animals. Springer, Berlin, 1984. 6. Stumpf, P. K., Conn, E. E. The Biochemistry of Plants, Vol. 7., Secondary Plant Products. Academic Press, N. York, 1981.		

