



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 ()	Doctorate (X)	
4. COMPONENT IDENTIFICATION:		
Name:	MEDICINAL CHEMISTRY	
Code:	CEP9433	
Hours:	64	
Credits:	04	
Optional course:	Yes (x)	No ()
Compulsory course:	Yes ()	No (x)
Area:	CHEMISTRY, ANALYTICAL CHEMISTRY, INORGANIC CHEMISTRY, ORGANIC CHEMISTRY AND PHYSICAL-CHEMISTRY	
5. PROFESSOR:		
6. ABSTRACT:		
Study of the structural aspects of substances and their relationship with biomacromolecules, in order to investigate molecules from their atomic constitution (through structure-property relationships, SPR) to their structural characteristics and their interactions with biological targets of therapeutic interest.		
7. COURSE PROGRAM:		
Definition and evolution of Medicinal Chemistry; Notions of Molecular Modeling; Study of molecular properties of drug candidates: logP, Solubility, pKa, surface tension; Application of <i>in silico</i> methods to establish molecular properties using free access computer programs: Marvin, VCCLab, Molinspiration, among others; Performing virtual screening of biological activities; Selection of enzymatic targets of therapeutic interest: use of PDB (Protein Data Bank); Natural products in Medicinal Chemistry. Contributions of Inorganic Chemistry to Medical Chemistry.		
8. EVALUATION PROCESS:		

The evaluation will be carried using a computer with internet access (40%), preparation and presentation of seminars (30%) and production of textual material (30%).

9. BIBLIOGRAPHY:

1. ANDREI, C. C.; FERREIRA, D. V.; FACCIONE, M.; FARIA, T. J. Da Química Medicinal a Química Combinatória Modelagem Molecular, Ed. Manole; 2ª Ed. Barueri, 2012, 168p.
2. BARREIRO, E. J.; FRAGA, C. A. M. Química medicinal: bases moleculares da ação dos fármacos. 3. ed. Porto Alegre: Artmed, 2015. 608 p.
3. LEMKE, T. L.; WILLIAMS, D. A.; ZITO, W. Foye's Principles of Medicinal Chemistry, 7th Ed., Media, Lippincott Williams & Wilkins, 1520 p. 2012.
- 4- PATRICK, G. L. An Introduction to Medicinal Chemistry, 6th Ed., Oxford University Press, 2017.
5. WERMUTH, C. G.; ALDOUS, D.; RABOISSON, P.; ROGNAN, D. The Practice of Medicinal Chemistry, 4th Ed., Amsterdam: Ed Elsevier, 902 p. 2015.
6. WITTY, D.; COX, B. Progress in Medicinal Chemistry, v. 58. Amsterdam: Ed Elsevier, 2019.