



**FEDERAL UNIVERSITY OF CEARÁ**  
**Provost Office of Research and Graduate Studies**

**COURSE PROGRAM**

<b>1. PROGRAM:</b>	
Program	GRADUATE PROGRAM IN CHEMISTRY
<b>2. COMPONENT TYPE:</b>	
Activity ( )	Course ( X )      Module ( )
<b>3. LEVEL:</b>	
Master's Degree ( x )      Doctorate ( x )	
<b>4. COMPONENT IDENTIFICATION:</b>	
Name:	MECHANISMS OF INORGANIC REACTIONS
Code:	CEP9200
Hours:	96
Credits:	6
Optional course:	Yes ( X )      No ( )
Compulsory course:	Yes ( )      No ( X )
Area:	Inorganic Chemistry
<b>5. PROFESSOR:</b>	
Luiz Gonzaga de França Lopes	
<b>6. ABSTRACT:</b>	
Correlate theoretical knowledge with experimental observations in order to describe and understand the kinetics of inorganic reactions.	
<b>7. COURSE PROGRAM:</b>	
1. Determination of the rate law 2. Mechanism deduction 3. Experimental determination of rate constants 4. Substitution reactions 5. Electron transfer reactions 6. Modifications of the reactivity of ligands by complex formation 7. Stereochemical variations: conformational, configurational, of geometric connections involving octahedral complexes, planar, tetragonal and bipyramidal squares.	
<b>8. EVALUATION PROCESS:</b>	
Tests, seminars Frequency equal to or greater than 75%	

## **9. BIBLIOGRAPHY:**

1. Wilkins, R.G.; "Kinetics and Mechanism of Reaction of Transition Metal Complexes", 2<sup>nd</sup> edition, VHC, NY, 1991.
2. Bernasconi, C.F.; "Investigation of Rates and Mechanism of Reactions, 4<sup>th</sup> edition, Wiley, NY, 1986.
3. Laidler, K.J.; "Chemical Kinetics", 3<sup>rd</sup> edition, Harper and Row, NY, 1987.
4. Basolo, F., Pearson, R.G.; "Mechanism of Inorganic Reactions", Wiley-Interscience, NY, 1967.
5. Atkins, P.; Overton, T.; Rourke, J.; Weller, M.; Armstrong, F.; Inorganic Chemistry 6<sup>th</sup> ed.; Oxford University Press, 2014.
6. Marusak, R. A.; Doan, K.; Cummings, S. D.; Integrated Approach to Coordination Chemistry: An Inorganic Laboratory Guide, Wiley-Interscience, 2007
7. Jordan, R. B.; Reactions Mechanisms of Inorganic and Organometallic Systems, 3<sup>rd</sup> Ed., Oxford University Press, 2007.