Curso:	**PROGRAMA DE PÓS-GRADUAÇÃO EM BIOQUÍMICA**	
Departamento:	Bioquímica - DBQ	
Centro:	Ciências Biológicas - CCB	
COMPONENTE CURRICULAR		
Nome da Disciplina: **Advanced enzyme kinetics**		Código: **DBQ4089**
Tipo: **Eletiva**		
Carga Horária Teórica: 30 h	Carga Horária Prática: 0h	Carga Horária Total: 30 h
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

Steady-state enzyme kinetics of uni- and multi-reactant and non-hyperbolic enzymes. Multi-enzyme systems kinetics and control.

2. OBJETIVOS

To use English as a tool to teach enzyme kinetics. To familiarize the graduate student with the most common English concepts in enzyme kinetics.

3. CONTEÚDO PROGRAMÁTICO

1. Basic steady-state enzyme kinetics: derivation of rate equations, general models of enzyme inhibition, reversible enzyme-catalyzed reactions, how to fit equations to data, resolution of exercises
2. Enzyme reaction sequences: multi-reactant enzymic reactions, analysis of multi-reactant enzyme kinetics, prediction of reaction sequence, effect of pH, enzyme-catalyzed isotopic exchange, resolution of exercises
3. Non-Hyperbolic enzyme kinetics: causes, analysis, subunit interactions, resolution of exercises.
4. Control of multi-enzyme systems: linear systems, branched systems, kinetics and non-equilibrium thermodynamics, resolution of exercises.

4. REFERÊNCIAS

- Bisswanger H. **Enzyme kinetics. Principles and methods.** Second edition. Weinheim: Wiley Wiley-VCH Verlag, 2008.
- Cornish-Boden A. **Fundamentals of enzyme kinetics.** Fourth edition. Weinheim: Wiley-Blackwell, 2012.
- Ioannides C. **Enzyme systems that metabolize drugs and other xenobiotics.** Chichester: John Wiley & Sons, 2001.
- Marangoni AO. **Enzyme kinetics: A modern approach.** Hoboken: John Wiley

& Sons, Inc., 2003.

- Plowman KM. **Enzyme kinetics.** New York: McGraw-Hill, 1972.
- Schulz AR. **Enzyme kinetics from diastase to multi-enzyme systems.** Cambridge: Cambridge University Press, 1994.

5. PROFESSOR RESPONSÁVEL (PROFESSORES RESPONSÁVEIS)

Prof. Adelar Bracht

APROVAÇÃO DO CONSELHO ACADÊMICO