



### Information about Ph.d course

1. Application period: From September, 01 to October, 10 for admission in March.
2. Selection Schedule
  - Application period: 09/01/2014 through 10/10/2014.
  - Announcement of confirmed applications: 10/14/2014.
  - Partial decision – Step 1 results: 10/17/2014
  - Exame Extra- Muros – Step 2: 10/24/2014
  - Results of Step 2: 12/12/2014
  - Summer school: 12/01/15 through 13/02/15
  - English Language Exam – Step 3: 02/04/2015
  - Final selection result: 02/27/2014
  - Enrollment and beginning of the classes: to be announced.
3. On vacancies and selection process
  - there are eight (08) vacancies to be filled in the current notice;
  - the Committee of Selection will realize the selection process and the final result will be approved by CPG
  - the selection process comprises three steps:
    - Step 1: applicants are ranked based on an analysis of the provided documents. Classificatory;
    - Step 2: exam named Exame Extra Muros 2015, organized jointly by UFRJ, USP/São Carlos and UFAL. All information pertaining to this exam may be found below in attachment I. Classificatory and eliminatory;
    - Step 3: Foreign Language Exam (english).
  - After Step1, the Committee of Selection issues a partial verdict: accepted or recommended to realize the step 2;
  - After Step 2, the Committee of Selection issues a partial verdict: accepted or not accepted;
  - After Step 2 and 3, the CPG issues a final decision.
4. Attachment I, Edital 03/2014 Information concerning the Exame Extra-Muros 2015

In order to participate in the exam Exame Extra-Muros 2015, please visit <https://docs.google.com/spreadsheets> and fill out all requested data.

EXAME EXTRA-MUROS'S content FOR PH.D 2015: Compact metric spaces . Convexity. Continuity. Diferenciability. Riemann-Stieljes Integral. Sequences and series of functions. Stone-Weierstrass Theorem. Functions of several variables. Differential applications between euclidean spaces. Linear transformation derivative. Gradient. Chain rule. Path in  $R^n$ . Cn Applications : Taylor's Formula. Inverse Application Theorem. Local Forms of immersions and submersions.

Implicit Functions. Rank Theorem. Surfaces. Lagrange Multipliers. Multiple Integration. Stokes's Theorem.

## **EXAME EXTRA-MUROS CONTENTS FOR PH.D 2015:**

### **Referências**

- [1] RUDIN, W. - Principles of Mathematical Analysis, International Series in Pure and Applied Mathematics, McGraw-Hill, 1976.
- [2] LIMA, E. L. - Análise no Espaço  $\mathbb{R}^n$ . Coleção Matemática Universitária, Rio de Janeiro, IMPA, 2004.
- [3] LIMA, E. L. - Curso de Análise, vols. 1 e 2 Rio de Janeiro, IMPA, Projeto Euclides, 1989.

5. More information: please send e-mail to [mtuyako@gmail.com](mailto:mtuyako@gmail.com)