# Important information related to the competitions, posted according toart. 3, alin 5 al H.G. 457/2011

#### **FACULTY OF SCIENCES**

## **Department of Mathematics**

Job description: Full professor, position 5;

Disciplines:

1) Applied nonlinear analysis

- 2) Special chapters on functional analysis
- 3) Financial mathematics

The scientific domain: Mathematics

The attributions / activities related to the professor position, including the didactic norm and the types of activities included in the didactic norm, respectively the research norm:

## I. Didactic norm:

Teaching activity210 hours;Practical work activities84 hours;Evaluation activities154 hours.

Total: 448 hours Average hours per week: 16 hours

II. Research norm: 300 hours (elaboration of scientific communications, writing studies and articles, publishing books, participation in national and international scientific events).

III. Scientific and methodological training activities and other activities in the interest of education: 972 hours.

Total: 1720 hours.

The topic of the competition tests, including lectures, courses or similar or the topics from which the competition committee can choose the topic of the tests:

- 1) Applied nonlinear analysis
- 2) Special chapters on functional analysis
- 3) Financial mathematics

## Bibliography:

- 1. R.A. Adams, Sobolev spaces, Academic Press, 1975.
- 2. H. Brezis, Functional Analysis, Sobolev Spaces and Partial Differential Equations, Springer, 2011.
- 3. Philippe G. Ciarlet, Linear and Nonlinear Functional Analysis with Applications, Society for Industrial and Applied Mathematics, 2013.

- 4. I. Ekeland, R. Temam, Convex analysis and variational calculus, Classics in applied mathematics, 28, SIAM 1999.
- 5. C. P. Niculescu, Probleme speciale de analiză funcțională, Ed. Universitaria, Craiova, 2005.
- 6. W. Rudin, Analyse fonctionelle, Ed. Edi Science International, 1995.
- 7. Shreve, S.E., Stochastic calculus and Finance I: Binomial Model, Springer, 2004.
- 8. M. Willem, Analyse fonctionnelle élémentaire, Ed. Cassini, Paris, 2003.
- 9. E. Zeidler, Nonlinear Functional Analysis and its Applications I: Fixed-Point Theorems, Springer, 1986.

**DEAN,** Assoc. prof. Cristian Tigae

HEAD OF THE DEPARTMENT,

Assoc. prof. Ionel Roventa