



ADMISSION TO DOCTORAL STUDIES Session September 2024

Field of doctoral studies: Mathematics

Doctoral supervisor: Professor Marin Marin

TOPICS FOR THE ADMISSION TO DOCTORAL STUDIES

TOPIC 1: Weak solutions for bodies with microstructure

Contents / Main aspects to be considered

Weak solution is defined in their general, abstract form.

It is then adapted for environments with microstructure. Some types of weak solutions and the importance of studying them.

Recommended bibliography:

1. M. Marin, Ecuatii cu derivate parţiale, Editura Tehnică, Bucureşti, 1998
2. D. Ieşan, Mecanica generalizată a solidelor, Centrul de multiplicare, Universitatea Al. I. Cuza, Iaşi, 1973.
3. Stan, Chiriţă, Mecanica mediilor continue, Editura Matrix Rom, Bucureşti, 2010

Prerequisites / Remarks:

Scientific Doctorate (full-time only)

without tuition fee (state budget funded)

TOPIC 2: Energy evolution for bodies with microstructure

Contents / Main aspects to be considered

The main types of energy that characterize a continuous body are defined. The evolution of these energies and the effect on the behaviour of continuous bodies are studied.

Applications in the case of bodies with microstructure. One can approach the behaviour ad infinitum.

Recommended bibliography:

Prerequisites / Remarks: *to be adapted/ completed/ deleted*

Scientific Doctorate (full-time only)

with tuition fee

Doctoral supervisor,

Prof. Habil. Marin Marin, Ph.D.

Signature



Coordinator of the field of doctoral studies,

Prof. Dr. Radu Paltanea

Signature

