Complexity Theory

Course level: Master MLDM  
Course code: MLDM CCT  
ECTS Credits: 4.00

Course instructors: Richard Baron (UJM, Saint- Etienne)

Education period (Dates): 1st semester  
Language of instruction: English

Expected prior-knowledge: Basics on analysis of algorithms, complexity, maths, graph theory.

Aim and learning outcomes:

Theoretical models of computation are introduced. They are used to show that some problems are inherently difficult to solve. The methodology used to prove that a given problem is difficult is presented.

Topics to be taught (may be modified)~30h:

- Non-deterministic Turing Machine.
- Classes of complexity: P/NP.
- NP-completeness: definition, methodology, examples.

Teaching methods: Lectures.

Form(s) of Assessment: written exam

Literature and study materials:

Reference books:

Additional information:

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