

# Algorithms for big data

## Lecturer

John IACONO (Coordinator)

## Course mnemonic

INFO-F440

## ECTS credits

5 credits

## Language(s) of instruction

English

## Course period

Second term

## Campus

Plaine

## Course content

Algorithms for big data. Classical algorithm analysis and core techniques (hashing, sorting). Bloom filters, sketching, streaming, dimensionality reduction, locality sensitive hashing, clustering, algorithms for external memory and cache-oblivious models.

## Objectives (and/or specific learning outcomes)

Students will learn a variety of algorithmic techniques, their application and analysis.

## Pre-requisites and co-requisites

### Required knowledge and skills

Basic knowledge of programming in a language such as python. Basic probability theory and algebra should be well-understood.

## Teaching method and learning activities

Lectures and homework. Almost all algorithms presented will be coded fully.

## Other information

### Place(s) of teaching

Plaine

### Contact(s)

John Iacono

## Evaluation method(s)

written examination and Project

### Main language(s) of evaluation

English

## Programmes

### Programmes proposing this course at the faculty of Sciences

MA-INFO | Master in Computer science | finalité Professional/unit 2 and MS-BGDA | Specialized Master in data science, Big data | unit U

### Programmes proposing this course at the Solvay Brussels School of Economics and Management

MS-BGDA | Specialized Master in data science, Big data | unit U

### Programmes proposing this course at the Brussels School of Engineering

MS-BGDA | Specialized Master in data science, Big data | unit U