

# COURSE DETAIL

## OPTIMIZATION

**Country**

France

**Host Institution**

University of Bordeaux

**Program(s)**

University of Bordeaux

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Mathematics

**UCEAP Course Number**

115

**UCEAP Course Suffix****UCEAP Official Title**

OPTIMIZATION

**UCEAP Transcript Title**

OPTIMIZATION

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

The objective of this course is to initiate the understanding of the methods and models of optimization. The first part of the course concerns convex optimizations, specifically conditions of optimality, the algorithm of the gradient, and its variants. The second part of the course concerns linear programming in the real and natural numbers. The emphasis is put on modeling. Topics include: modeling, the formalization of concrete problems in the form of mathematical optimization; optimization without constraints (analytic resolution, dichotomy, variants of the gradient); optimization with constraints (conditions of optimality, linear programming, linear programming with whole numbers).

## Language(s) of Instruction

French

## Host Institution Course Number

4TMQP01U

## Host Institution Course Title

OPTIMIZATION

## Host Institution Campus

UNIVERSITÉ DE BORDEAUX: Collège des Sciences et Techniques

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Mathématiques

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