Dynamic Optimization CM

Course title - Intitulé du cours	Dynamic Optimization CM
Level / Semester - Niveau /semestre	M1 / S2
School - Composante	Ecole d'Economie de Toulouse
Teacher - Enseignant responsable	ALZIARY-CHASSAT BENEDICTE
Other teacher(s) - Autre(s) enseignant(s)	
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Other teacher(s) - Autre(s) enseignant(s)	
Lecture Hours - Volume Horaire CM	15
TA Hours - Volume horaire TD	12
TP Hours - Volume horaire TP	0
Course Language - Langue du cours	Anglais
TA and/or TP Language - Langue des TD et/ou TP	Anglais

Teaching staff contacts - Coordonnées de l'équipe pédagogique :

alziary@ut-capitole.fr MC 104

Course's Objectives - Objectifs du cours :

The objective is to develop the basic tools of recursive analysis in a rigorous way. The course focuses on useful tools for economics areas.

Course description:

Mathematical Preliminaries

-Banach space

-The contraction mapping theorem

-Theorem of maximum

Dynamic Programming

-The principle of optimality

-Optimal plan

-Bounded returns

-Existence of solution for the functional equation

-Properties and regularity of the solution

-Constant returns to scale

-Unbounded returns

Prerequisites - Pré requis :

Basic notions on convergence of real sequences and series. Optimization of one variable functions.

Practical information about the sessions - Modalités pratiques de gestion du cours :

Many documents will be available on the course Moodle platform.

Grading system - Modalités d'évaluation :

Final Exam

Bibliography/references - Bibliographie/références :

Recursive Methods in Economic Dynamics, Nancy L. Stokey and Robert E. Lucas, Jr., With Edward C. Prescott Harvard Press University.