**COURSE :Economic Complexity**

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**COURSE BACKGROUND**

The course aims at providing a self consistent introduction on complex systems, including basic characteristics, predictability properties, optimizations and simulations. The relation between complex systems and Big Data analysis is discussed for the case of complexity in products and economic trades. A particular emphasis is given on the computation of product networks and the concept of fitness.

**LEARNING OBJECTIVES**

The students will learn how to approach the analysis of specific questions by conceptual models and related computations. The basic objective is to understand how to discriminate different approaches for the same question and how to validate the approach against data.

**METHODOLOGY**

Theoretical and in depth discussions of complex systems characteristics. Theoretical and conceptual presentation of economic complexity and its applications to real data. Laboratory sections on the analysis of existing data.

**EXAM**

Discussion on the Laboratory results and the conceptual tools used in the course.

**CONTENTS**

**TEACHING MATERIAL**

Slide presentations and link to the most important paper on the subjects.

**SUGGESTED READING**

A detailed list of references will be given for each lectures.

**ADDITIONAL SUGGESTED TEXTBOOKS**