SYLLABUS DEL CORSO

Dinamica dei Sistemi Aziendali

2021-1-F7701M092-F7701M088M

Learning objectives

Access key to the e-learning course: 2021DSARD

The aim of the course is to introduce the modern systemic approach for the analysis and modelling of problems that can arise in a company context through the concepts and methods of operations research, a management science that can offer several supporting methods for the final decisions to be taken once the modelling process is completed. The overall objective is to develop the aptitude and the ability to analyse a problem in scientific terms.

Contents

Analysis and deep understanding of the dynamics underlying any business process, contextual to any auditing activity: delimitation of the boundaries of a system (or problem), definition of variables and cause-effect relationships, activity scheduling, cost analysis and resource optimization.

Detailed program

The nature and the importance of operations research in the context of business organizations: modelling, optimization of resources and teamwork. Steps of any modelling process. Overview of some important models of operations research.

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Prerequisites

Basics of mathematics, in particular analytic geometry and linear algebra.

Teaching methods

5 credits corresponding to 35 frontal lectures.

In case of Covid-19 emergency, lectures are recorded and they will take place asynchronously in remote mode with possible synchronous videoconferencing events.

Assessment methods

Written test which is considered approved if the grade is at least 18/30.

In case of Covid-19 emergency, exams will be held online by means of the WebEx platform.

Textbooks and Reading Materials

- Slides for all the topics will be available.

- Stefani, Torriero, Zambruno. Matematica finanziaria con elementi di programmazione lineare. Giappichelli

- Carcano. Programmazione lineare. Datanova (for linear programming)

- D'Ercole, Stefani. Modelli matematici per le decisioni aziendali, Esculapio

- Bellenzier L., Grassi R., Stefani S., Torriero A., Metodi quantitativi per il Management, Esculapio

Semester

First semester

Teaching language

Italian