

Course guide

220567 - 220567 - Research Seminars on Management Engineering

Last modified: 19/04/2023

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering

Teaching unit: 732 - OE - Department of Management.

Degree: MASTER'S DEGREE IN MANAGEMENT ENGINEERING (Syllabus 2012). (Compulsory subject).

Academic year: 2023

ECTS Credits: 3.0

Languages: Catalan, Spanish

LECTURER

Coordinating lecturer: Pep Simo

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. Apply concepts and techniques of descriptive and statistical inference under uncertainty.
2. Apply quantitative and experimental methods for making decisions in situations where intangibles appear
3. Apply theories and inherent principles in the production and logistics area in order to analyze uncertainty complex situations and make decisions using engineering tools.
4. Apply theories and inherent principles in the personal area in order to analyze uncertainty complex situations and make decisions using engineering tools.
5. Apply theories and inherent principles in the general direction of an organization with the aim of analyzing uncertainty complex situations and make decisions using engineering tools.
6. Develop and present a research proposal according to the criteria of the international scientific community.

Generical:

7. Ability to integrate knowledge and formulate judgments with the aim of making decisions based on information that, with incomplete or limited include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgments.
8. Ability to effectively communicate their findings, knowledge and concluding reasons to skilled and unskilled audiences, clearly and unambiguously.
9. Self-learning capacity to independent continuous training.

TEACHING METHODOLOGY

The course is divided into three parts:

Theory classes

Guided activities class

Self-study for doing exercises and activities.

In the theory classes, teachers will introduce the theoretical basis of the concepts, methods and results and illustrate them with examples appropriate to facilitate their understanding.

In the guided activity class (in the classroom), teachers guide students in applying theoretical concepts to solve problems, always using critical reasoning. We propose that students solve exercises in and outside the classroom, to promote contact and use the basic tools needed to solve problems.

Students, independently, need to work on the materials provided by teachers and the outcomes of the sessions of exercises/problems, in order to fix and assimilate the concepts.

The teachers provide the curriculum and monitoring of activities (by ATENEA).

LEARNING OBJECTIVES OF THE SUBJECT

The course Research Seminars on Management Engineering introduces students to the concepts, principles and fundamentals scientific research in Management Engineering organization from two points of views: the first presents the research from a methodological point of view (and more theoretical and formal) and a second point of view where cases and particular areas of scientific research in the engineering organization are presented.

STUDY LOAD

Type	Hours	Percentage
Hours large group	8,0	10.67
Guided activities	16,0	21.33
Hours medium group	3,0	4.00
Self study	48,0	64.00

Total learning time: 75 h

CONTENTS

Module 1: Research Concepts in Management Engineering

Description:

Introduction
The research question
Quality indexes for scientific research
Working with the literature
Research design
Data collection
Data management and analysis
The challenge of writing the results

Full-or-part-time: 75h

Theory classes: 8h
Practical classes: 3h
Guided activities: 16h
Self study : 48h

GRADING SYSTEM

Activity A1 (20%)
Activity A2 (20%)
Activity A3 (25%)
Activity A4 (35%)

All activities will be recoverable with a second optional delivery.

BIBLIOGRAPHY

Basic:

- Corominas, Albert. Research into the area of supply chain [on line]. Barcelona: OmniaScience, 2017 [Consultation: 14/01/2021]. Available on: <https://www.omniascience.com/books/index.php/scholar/catalog/book/49>. ISBN 9788494635281.
- Corominas Subías, Albert. La investigació en l'àmbit de la cadena de subministrament [on line]. Barcelona: OmniaScience, 2017 [Consultation: 14/01/2021]. Available on: <https://www.omniascience.com/books/index.php/scholar/catalog/book/46>. ISBN 9788494635229.
- Amat Salas, Oriol; Rocafort Nicolau, Alfredo; Rodrigo de Larrucea, Jaime. Com fer recerca: treball de final de grau, tesi de màster, tesi doctoral i altres projectes de recerca. Barcelona: Profit Editorial, 2017. ISBN 9788416904679.

RESOURCES

Other resources:

Notes posted to the Atenea platform