

Course guide

220134 - DC - Decision Criteria - Engineer as Employee or Engineer as Entrepreneur

Last modified: 11/04/2025

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 758 - EPC - Department of Project and Construction Engineering.

Degree: BACHELOR'S DEGREE IN AUDIOVISUAL SYSTEMS ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN TEXTILE TECHNOLOGY AND DESIGN ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN AEROSPACE TECHNOLOGY ENGINEERING (Syllabus 2010). (Optional subject).
BACHELOR'S DEGREE IN AEROSPACE VEHICLE ENGINEERING (Syllabus 2010). (Optional subject).
BACHELOR'S DEGREE IN INDUSTRIAL DESIGN AND PRODUCT DEVELOPMENT ENGINEERING (Syllabus 2010). (Optional subject).
BACHELOR'S DEGREE IN INDUSTRIAL TECHNOLOGY ENGINEERING (Syllabus 2010). (Optional subject).

Academic year: 2025 **ECTS Credits:** 3.0 **Languages:** English

LECTURER

Coordinating lecturer: Víctor Sánchez Rodríguez

Others:

TEACHING METHODOLOGY

Theoretical explanations. Self-reflections and discussion about the theoretical explanations working in groups. Examples, cases and exercises.

LEARNING OBJECTIVES OF THE SUBJECT

Knowing the factors and fundamentals that you need to know, analyze and evaluate to make the best decision regarding the two alternatives:

Engineer employee or Engineer entrepreneur / employer?

After concluding the course, participants will be able to:

? Make the best decisions about alternatives and opportunities offered by the existing market-aligned expectations, vision, skills and personal and professional skills of students attending the last years of the different careers in engineering, considering their environment / features individual and the possibilities offered by the market.

? Minimize the risk of error in decision making "Engineer employee or Engineer entrepreneur / employer?".

STUDY LOAD

Type	Hours	Percentage
Self study	45,0	60.00
Hours large group	30,0	40.00

Total learning time: 75 h

CONTENTS

MODULE 1: MARKET OPPORTUNITIES

Description:

This module discusses the current status and recent and future trends regarding entrepreneurship. The current market environment and the current state of technologies (internet as principal) is supplementing or replacing the more traditional labor market by other options (self-employment, entrepreneur, etc ..), becoming an alternative chosen by more and more professionals.

At the end of the module, each participant will have an overall picture of the entrepreneurial market, and forecasting future developments in the coming years.

Related activities:

Theoretical explanations. Self-reflections and discussion about the theoretical explanations working in groups. Examples, cases and exercises.

Full-or-part-time: 7h 30m

Theory classes: 3h

Self study : 4h 30m

MODULE 2: ENTREPRENEURIAL PROFILE

Description:

The aim of this course is the analysis of the alternative: entrepreneur or employee.

Being an entrepreneur brings opportunities and risks. The first risk that has to be tackled, and since its inception, is if I have the entrepreneurial profile or not.

Thus, this module will respond to the following questions, among others:

What kind of people become entrepreneurs? What skills and personal characteristics tend to have entrepreneurs? Is there a model of entrepreneurial behavior?

At the end of the module, each participant will carry out the evaluation of their enterprising profile to know their "level of entrepreneurial?"

Related activities:

Theoretical explanations. Self-reflections and discussion about the theoretical explanations working in groups. Examples, cases and exercises.

Full-or-part-time: 17h 30m

Theory classes: 7h

Self study : 10h 30m

MODULE 3: PLANS OF AN ENTERPRISING PROJECT

Description:

Module 3 solves preliminarily, not in detail, the main elements that should contain a business plan: from the idea, start-up, and implementation. It is not intended to resolve in detail all elements of a business plan, but it is intended to resolve those key aspects that identify a business plan.

The aims of the different areas will be described, and the elements which have to contain the different main plans also will be described:

Strategic Plan / Business Plan / Plan of Operations / Economic and Financial Plan

At the end of the module, each participant will perform the analysis and evaluation of a Business Plan.

Full-or-part-time: 25h

Theory classes: 10h

Self study : 15h



MODULE 4: MANAGEMENT SYSTEMS, ORGANIZATION AND HR

Description:

From Plans to Reality: this module addresses the key elements that should contain the Management Systems, the Organization System and the HR System. It has not the intention to resolve in detail all the items listed, but it describes those key aspects that identify the above Systems.

After completing this module, participants will perform the analysis and evaluation of the above elements in a MANAGEMENT SYSTEMS, ORGANIZATION AND HR.

Related activities:

Theoretical explanations. Self-reflections and discussion about the theoretical explanations working in groups. Examples, cases and exercises.

Full-or-part-time: 25h

Theory classes: 10h

Self study : 15h

GRADING SYSTEM

The assessment will be a combination between the works inside the class and the homework activities.

BIBLIOGRAPHY

Basic:

- Kawasaki, Guy. El Arte de empezar : una guía infalible para empezar cualquier cosa. [Madrid]: Ilustrae, DL 2007. ISBN 9788493614805.
- Trías de Bes, Fernando. El Libro negro del emprendedor : no digas que nunca te lo advirtieron. Barcelona: Urano, cop. 2007. ISBN 9788496627260.
- Alfonso, Javier. Historia de un éxito : Mercadona : las claves del triunfo de Juan Roig. Barcelona: Conecta, cop. 2014. ISBN 9788415431947.
- Isaacson, Walter. Steve Jobs : la biografía. Barcelona: Debate, 2011. ISBN 9788499921181.
- Johnson, Spencer. ¿Quién se ha llevado mi queso? : una manera sorprendente de afrontar el cambio en el trabajo y en la vida privada. Barcelona [etc.]: Urano, 2000. ISBN 8479534451.