

Economic evaluation of industrial projects

Elio Padoano

General information

- Lecturer of the module “Economic evaluation of industrial projects”.
- Elio Padoano (padoano@units.it)
- Università degli Studi di Trieste
- Department of Engineering and Architecture
- Building C7, second floor, Piazzale Europa (Trieste)

- Lectures

- Thursday, 2.00pm - 4.00pm (Building B, room E)
- Friday, 2.00pm - 4.00pm (Building C2, room A)

- Office hours

Students who want to meet the lecturer are invited to send an email to arrange a face-to-face or on-line meeting.

Website and communication

- The material and recordings of lectures are available on the Teams of the module.
- The material for the course can also be retrieved from the following website:
 - moodle2.units.it
 - > Dipartimento di Ingegneria e Architettura
 - > Laurea Magistrale IN22 - ENGINEERING FOR THE ENERGY TRANSITION
A.A. 2025 – 2026
469MI-2 - ECONOMIC EVALUATION OF INDUSTRIAL PROJECTS 2025
- The above platforms are also used for communication purposes.

Objectives of the module

- Economic evaluation provides a comprehensive analysis that supports informed decision-making and ensures that projects are both economically and socially beneficial.
- Learning objectives:
 - understand the foundations and the main methods for economic or multicriteria evaluation of projects in industry
 - select and apply the methods that are appropriate and useful for the economic or multi-criteria evaluation of projects in industry.

Main topics

- Introduction on projects and decision-making processes
- Objectives and structure of feasibility studies
- Foundations of economic evaluation with specific reference to industrial projects
- Revenue and cost components of industrial projects
- Financial parameters employed in the evaluation

- Methods of economic evaluation and examples of application
- Technical aspects and performance indicators of energy transition projects

- Cost-effectiveness analysis for industrial projects

- Foundations and general structure of multi-criteria decision analysis (MCDA)
- MCDA methods and examples of application
- Methods for the assessment of the parameters needed in MCDA.

Module material

- The lecturer provides the course slides and other material (papers, readings etc.) to support students' learning.
- Suggested textbook (in the Tech_Sci library):
 - Eschenbach T., Engineering economy, 3rd ed., Oxford University Press, 2010

Final exam

- The exam is a written test with three open-ended questions and two exercises (simple applications of methods).
- Each question is marked on a 6-point scale (6 is the top mark).
- The mark of a question is a “partial mark”, and the sum of all partial marks is the “total mark” of the test.

Final exam

- To pass the exam, the total mark must be at least 18 AND each partial mark must be at least 2.
- Examples:

Questions	1st	2nd	3rd	4th	5th	Total	Pass/Fail
Mark A	4	4	6	5	0	19	Fail
Mark B	3.5	4	2	3	2.5	15	Fail
Mark C	3.5	5	2	4.5	5	20	Pass

Final exam

- The evaluation of the answers depends on the following aspects:
 - the answer is clear and logically organized
 - the answer is focused on the question and accurate
 - the terminology is appropriate and precise
 - (exercises) the application of methods is clearly structured
 - (exercises) the application of methods is correct and accurate, and the results are clearly presented.

Final exam

- The final mark of the course “Economics and evaluations for the energy transition” is the average of the two modules:
 - Environmental economics
 - Economic evaluation of industrial projects
- The mark of each module must be no less than 18 to pass the whole course.