

Faculty of Applied Sciences



FSAB1803 Economy of the firm

[30h+30h exercises] 3 credits

This course is taught in the 2nd semester

Teacher(s): Jean-Pierre Hansen (coord.), Yves Smeers
Language: French
Level: First cycle

Aims

The objective of the course is twofold:

" Provide the student with a rigorous, partially formalized, introduction to basic economic concepts: market structures, agent behaviour, regulation#..

" Provide operational tools of particular relevance for the engineer working in the firm

This duality of objective is justified by the fact that this the course maybe the only economic material offered to students who do not select a minor in economics or management. The course should also provide the necessary background to the student who selects a minor with an economic or management orientation.

The part of the course devoted to the more basic material will focus on basic economic concepts, which are thought to be more relevant for the practicing engineer. An introduction to important macro economic material (inflation, public finance, monetary question) is also provided

The section of the course devoted to operational instruments is of a more technical nature. It focuses on investment and organisation issues. These are present in firms but also in many other organisations, whether regulated or in competition, whether for or not for profit#.

Main themes

The course is divided in three main sections

" Introduction to fundamental macro economic concepts (two lectures). The aim is to describe the general economic environment of the firm.

" Micro-economic analysis of the firm and of the market. This includes a rigorous introduction to micro economic concepts and to major economic doctrines.

" Investment calculus including a discussion of the main variables that determine the investment process and its impact.

Content and teaching methods

1. Key macro economic concepts of relevance to the firm and the markets
 - " National product, unemployment, inflation
 - " Global demand: consumption, investment, international trade
 - " Monetary questions, banking and credit
 - o The role of money and its supply
 - o The financial system
 2. Economic analysis of the firm and the market
 - " A first model: perfect competition; the model, its properties and its use as a reference case
 - " A second model: the monopoly, the model, price discrimination, and the monopoly as an alternative reference case
 - " The regulation of firms in monopoly position
 - " Oligopolistic markets, description of different models, comparative analysis of price determination with respect to perfectly competitive and monopolist prices
 - " Models of product differentiations, cartel
 3. Investment analysis
 - " Analysis of financial flows
 - o Basic accounting concepts, balance sheet and income statement
 - o Sources and use of funds
 - " Evaluation and control
 - " Cost analysis
 - o Marginal cost, average cost, fixed costs, variable and direct costs, allocated costs, long and short run costs
 - o Cost of capital
 - " Investment decision and return analysis
 - o Investment evaluation methods
 - o Introduction to the treatment of uncertainty
 - o Cases of investment analysis
 - " Impact of the decision to invest of the results of the company and its cash flow
- Case studies and practical exercises, as well as well as special lectures devoted to economic subjects of current interest current will accompany the course.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

- No prerequisite
- The evaluation components a final exam at the end of the quadrimester (written exam).
- Workfiles for each of the parts (available on the website and in printed version)

Other credits in programs

FSA11BA	Première année de bachelier en sciences de l'ingénieur, orientation ingénieur civil	(3 credits)	
FSA12BA	Deuxième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil	(3 credits)	Mandatory
FSA13BA	Troisième année de bachelier en sciences de l'ingénieur, orientation ingénieur civil	(3 credits)	