Information Economics 2014 - 2015

<table>
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<th>Degree</th>
<th>Type</th>
<th>Year</th>
<th>Semester</th>
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<td>2501572 Administració i Direcció d'Empreses</td>
<td>OT</td>
<td>4</td>
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<td>2501573 Economia</td>
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**Use of languages**

Principal working language: espanyol (spa)
Some groups entirely in English: Yes
Some groups entirely in Catalan: No
Some groups entirely in Spanish: Yes

**Contact**

Name: Inés Macho Stadler
Email: Ines.Macho@uab.cat

**Prerequisites**

Although not mandatory, it is advisable to have a good level of mathematics and microeconomics, as we will use tools of these disciplines.

**Objectives and Contextualisation**

To acquire the basic tools of the Economics of Information, a discipline that allows studying the effects that the existence of asymmetric information has on the terms of contracts.

To present the models of moral hazard, adverse selection and signaling, to explain the terms of the contracts in different situations, in particular depending on who has more information and how this agent may try to capitalize on it.

To develop tools of economic analysis as well as economic intuitions to understand the design of contracts and regulatory mechanisms.

**Skills**

Administració i Direcció d'Empreses
- Apply mathematical instruments to synthesise complex economic-business situations.
- Capacity for adapting to changing environments.
- Capacity for independent learning in the future, gaining more profound knowledge of previous areas or learning new topics.
- Capacity for oral and written communication in Catalan, Spanish and English, which enables synthesis and oral and written presentation of the work carried out.
- Demonstrate initiative and work individually when the situation requires it
- Identify the forces that govern demand and supply.
- Identify the processes that govern the operation of markets in different competition systems, different scenarios of interrelationship and different timescales.
- Organise the work in terms of good time management, organisation and planning.
- Select and generate the information necessary for each problem, analyse it and take decisions based on that information.
- Show motivation for carrying out quality work and sensitivity to the consequences for the environment and society.
• Work well in a team, being able to argue proposals and validate or reject the arguments of others in a reasoned manner.

Economia
• Analyse situation in which there is unequal information between the two sides involved.
• Capacity for adapting to changing environments.
• Demonstrate initiative and work individually when the situation requires it.
• Formulate recommendations of economic policy that improve efficiency and equity in market operations.
• Identify the processes that govern the operation of markets in different competition systems, different scenarios of interrelationship and different timescales.
• Organise the work in terms of good time management, organisation and planning.
• Select and generate the information necessary for each problem, analyse it and take decisions based on that information.
• Take decisions in situations of uncertainty, demonstrating an entrepreneurial and innovative attitude.

Learning outcomes

1. A capacity of oral and written communication in Catalan, Spanish and English, which allows them to summarise and present the work conducted both orally and in writing.
2. Analyse the determinants of demand.
3. Analyse the determinants of supply.
4. Analyse the operating conditions of markets and other forms of social interaction.
5. Associate the technological structure of companies with the cost structure and describe the translation process.
6. Capacity to adapt to changing environments.
7. Capacity to continue future learning independently, acquiring further knowledge and exploring new areas of knowledge.
8. Consider formal models which can be used to study situations with information asymmetry between the parts.
9. Consider the effect of the public sector on the activity of companies and consumers.
10. Demonstrate initiative and work independently when required.
11. Demonstrate motivation regarding the quality of the work performed and sensitivity regarding the consequences on the environment and society.
12. Differentiate between different market structures and analyse the effects on the sales and profits of companies, and on the wellbeing of consumers.
13. Differentiate the effects of equilibrium on perfect and imperfect competition.
14. Formulate and solve general equilibrium problems and recognise chains of interdependence.
15. Identify market errors and define the corrective mechanisms of public intervention.
16. Identify the basic elements that characterise the organisation of a market.
17. Identify the conditions and processes that generate externalities as well as the problems posed by public goods.
18. Identify the consequences of the existence of information asymmetry among different economic agents on the way in which these organise themselves and on the efficiency of the relationship they establish.
19. Make decisions in situations of uncertainty and show an enterprising and innovative spirit.
20. Organise work, in terms of good time management and organisation and planning.
21. Propose the optimum design of the institutions regulating the markets and of its equipment.
22. Recognise the role of uncertainty in the decision-making of consumers and companies.
23. Relate intertemporal aspects to the decision-making processes of economic agents.
24. Select and generate the information needed for each problem, analyse it and make decisions based on this information.
25. Solve equilibrium problems and interpret their meaning.
26. Solve the models formulated to obtain empirically stable predictions.
27. Use basic optimisation tools and the game theory, and include these elements in a theoretical model.
28. Work as part of a team and be able to argue own proposals and validate or refuse the arguments of others in a reasonable manner.

Content
1. INTRODUCTION

1.a. Introduction
1.b. Elements of the problem
1.c. Timing of the relationship
1.d. Typology of asymmetric information problems

* Moral Hazard
* Adverse Selection
* Signaling

1. 2. CONCEPTS THAT WILL USE (REVIEW AND/OR EXPOSITION FOR OUR COURSE PURPOSES)

2.a. Expected utility and expected value
2.b. Sequential Equilibrium (sub-game perfection)
2.c. Maximization methods

3. THE BASIC MODEL

3.a. Introduction
3.b. Model Description
3.c. The symmetric information contracts

* The optimal payment mechanism
* The level of effort training

4. THE MORAL HAZARD PROBLEM

4.a. Introduction
4.b. The two efforts case
4.c. Consequences for the contract of the presence of moral hazard
4.d. Extensions
Exercises, applications and examples

5. ADVERSE SELECTION PROBLEM

5.a. Introduction
5.b. Case of two types
5.c. Consequences for the contract of the existence of adverse selection
Exercises, applications and examples

6. SIGNALLING

6.a. Introduction
6.b. The value of private information and signaling
6.c. The informative power of contracts
Exercises, applications and examples

Methodology

The course combines theoretical and applied classes. The first will be devoted to the presentation of models of contracts under asymmetric information and the resolution of these models to obtain general conclusions applicable to the study of specific problems. The second type of sessions will be devoted to analyze examples and discuss the application to different real problems of the theoretical conclusions and their implications. In these sessions, students must participate in solving exercises and discussing the proposed topics.
Activities

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<th>Learning outcomes</th>
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Evaluation

The evaluation will consist of class participation, a midterm exam and a final exam. Class participation includes answering the lists of exercises and participating in the discussion topics. The weight of each of the above items in the calculation of the final grade is as follows: Final exam 60%, 30% the midterm exam, 10% for participation, exercises and other work.

Students who obtain in the evaluation a mark equal to or greater than 4 but less than 5 are entitled to a reevaluation. This reevaluation will take the form of an exam, and will be scheduled in the calendar of exams. In this reevaluation if the student passes the exam, she/he will have a final grade a 5 in the course. Otherwise she/he will keep the previous note.

A student is considered "not evaluated" to the course if she/he as not participated in any of the evaluation activities. Therefore, if a student has participated in one of the assessment components will not be eligible for the rating "not evaluated".

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Evaluation activities

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</table>
Bibliography

Basic References:

MACHO STADLER, Ines and David PEREZ CASTRILLO: Introduction to Economics of Information, Oxford University Press.

In addition be recommended readings in class to complete the basic bibliography. This material and other material such as lists of exercises will be incorporated into the "Campus Virtual".