

# **EC1A3: Microeconomics I**

## **Autumn Term**

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## **Course Description**

In this course, you will learn the main building blocks of microeconomics analysis and their applications. You will study the foundations of rationality and individual decision making and learn about strategic interaction and equilibrium (game theory). You will apply these tools to understand many applications, such as how consumers behave, how companies choose their strategies and how auctions work. The course will also touch upon behavioural models and how we think about individual welfare in economics.

This course, in combination with either EC1B3 or EC1B5, exempts those who complete them from BA1 Fundamentals of Business Economics of the Chartered Institute of Management Accountants (CIMA).

This course, combined with EC1B3, contributes to the CB2 Exemption of the Institute and Faculty of Actuaries (IFoA).

## **General structure of the course delivery strategy**

The main material of the course will be delivered both online and in person with both asynchronous and synchronous methods. The course is designed so that you will take a more active role in your learning. It is therefore important that you understand the structure of the course, the material available and what is demanded from you to make the most out of this course.

The learning strategy in the course is built on three pillars:

1. **Learning:** The tools of economic analysis, rationality, strategic interaction, equilibrium, behavioural biases.
2. **Practice, participate, discuss.** Through different activities, independently and in classes you will train yourself in using the economic tools to solve problems and answer and discuss questions.
3. **Mastering.** The aim of the course is that you master using economic tools to think about, analyse and make predictions about applications in the social sphere.

To deliver the above pillars we have created a weekly schedule that we will follow:

## EC1A3 Week tasks flowchart

<b>Before Monday</b>	<ul style="list-style-type: none"><li>- Videos</li><li>- Go over slides for Mon lecture</li></ul>
<b>Monday Lecture</b>	Online lecture
<b>Before Thursday</b>	<ul style="list-style-type: none"><li>- Videos</li><li>- Midweek task (<b>e</b>)</li><li>- Go over Thursday's slides</li></ul>
<b>Thursday Lecture</b>	Peacock Theatre
<b>Friday Q&amp;A</b>	Online (weeks 2,4,6,8,10)
<b>End of week</b>	<ul style="list-style-type: none"><li>- Videos</li><li>- Problem set</li><li>- MCQ quiz on Moodle</li></ul> <p>Optional:</p> <ul style="list-style-type: none"><li>- Extra material</li><li>- X-cur problem set (challenging questions above the level of the exam)</li></ul>

**(e)-** Submission of these tasks goes towards the engagement score for the course. The Engagement score is 10% of the final mark in the course.

## **Video recordings and Live sessions**

Pre-recorded videos are 10-35 minute long videos going over parts of the material of the course. These will be posted in the Moodle page for the course and should be consumed in the sequence in which they appear on Moodle.

Live sessions will take place once a week, on Mondays, using Zoom; links are posted on Moodle. The live session will be a mix of lecture, QandA and other interactive activities.

A Live Q&A session run by the lecturer will also take place on Friday every two weeks, i.e. in weeks 2, 4, 6, 8 and 10. You will be able to ask questions during the session.

## **Midweek Tasks and the engagement mark**

These will be posted on Moodle after the live sessions on Mondays. They compose readings and\or independent research activities, some as prep for Thursday's lecture. The lectures on Thursday's will sometimes be designed under the assumption that you have completed these tasks, so it is essential that you do so before Thursday's lectures. They will be due Thursday just before lecture time and should be uploaded on the Moodle page for the course. Submission of these tasks also goes towards the engagement score for the course which carries 10% of the final mark in the course. Please be aware that the submission portal for the midweek tasks will close at the time of the lecture and you will not be able to submit your work anymore for that week.

## **Moodle MCQ quiz**

In weeks 1 to 10, there will be Moodle MCQ quizzes. Each week the Moodle quiz will be posted on Thursday at 2 pm (just at the end of the lecture) and must be completed by Sunday 12 pm (noon). Although they do not contribute to the engagement score, completing the Moodle quiz is important to make sure one stays on top of taught materials and is ready for class discussion. The completion of the Moodle quiz will be tracked, and feedback will be provided.

The quizzes follow the format and level of difficulty as in the exam. They will also be marked according to the unique marking system we have for MCQ's in the exam (see

FAQ's) so it is very important you get familiar with these by completing the quiz each week.

## **Problem Sets**

We will also post a Problem Set every Thursday at 2 pm on Moodle, due Sunday at noon. As for the Moodle quiz, it is crucial to complete the assignment before class to be ready for class discussion. Your assignments from weeks 2 and 7 will be marked by your class teacher, with feedback provided in weeks 4 and 9. Though Problem Sets do not contribute to the final mark, they are crucial for the preparation of the exam as they follow the level and format of exam questions.

## **Extra-Curricular (X-cur) challenge set**

Each week we will also post an Extra-Curricular challenge set. This set is not obligatory and is often at a level higher than what we expect students to do in the exam. These sets are meant to provide more advanced students with a taste of more advanced material. The solutions to these sets will be provided, but not discussed in classes.

## **Classes**

Classes are scheduled for weeks 2 to 11. Make sure to complete the latest Moodle quiz and Problem Set to be able to come to class prepared to discuss these questions. Attendance at classes is mandatory, and class teachers will register your presence.

Participating in the class is crucial to learn the material, and we strongly recommend that you ask your own questions, try to answer the questions posed by the class teacher, and discuss the material with your colleagues in the weekly class. There is strong evidence that the more a student is active in the class, the better will do in the final exam.

## Textbook

**There is no mandatory textbook for this course.** The examinable material is the entire content of the material on the Moodle page for the course. It is therefore essential to take detailed notes of what is presented.

Optional suggested further readings are listed below. Any edition of these books can be used.

- Further reading on topics: Microeconomics – Daron Acemoglu, David I. Laibson, and John A. List (note the content is also part of the textbook Economics by the same authors).
- Further readings on tools: Jacques, I. Mathematics for Economics and Business, Pearson.

## Exam

The exam paper format will have two sections. Section A will count 30% towards the exam mark and will include a few short questions. Section B will count 70% towards the exam mark and will include 2 long questions with sub-questions. You will have to answer all questions.

Moodle tests and Problem Sets provide a guide and are designed to practice for the exam. All materials covered in pre-recorded video lectures, live sessions, classes, readings, midweek tasks, quizzes or problem sets are examinable, regardless of the time devoted to them.

## Support

We will be providing support through several channels. If you have a question regarding the content of the course:

1. You first post your question on Ed, the discussion forum we will be using for this course.
2. Other students should try and answer the question. Ed is a **discussion** forum, so it is used to discuss the material and engage with it. A Ed answer is usually a collaborative effort: each student can contribute a part, a sentence, a diagram, some equations, etc.
3. The course team can confirm the answer, complement it, or suggest an alternative one.
4. There can be follow up questions, which again can be discussed by students and/or the course team.

We will also have the Economics Support Lab in LSE LIFE (in the Library). This is a place where you can drop in and ask questions to class teachers, at specific times and days of the week. The Lab will start in week 3, and we will be posting more information in the first two weeks.

Every other week (starting week 2) there will be a live Q&A with Prof. Razin where you will have the opportunity to raise questions and hear responses to your and others' questions.

If questions are not resolved by any of the above, please feel free to contact the course coordinator or the Lecturer.

## Outline of the course

1. **Block 1:** Intronomics
  - An introduction to economics and what it is good for.
  - **Week 1:** Introduction to the course, The Kitty Genovese case study showcasing what we do in economics and how it relates to other disciplines in the social sciences.
2. **Block 2:** Individual Decision making

- How do economists think about how individuals make decisions in their everyday life?
- A model of individual behaviour: Rationality
- **Week 2:** Introducing the *model of rationality*, Applying the rationality model to consumer behaviour: Optimal consumption, the relation between goods, substitutes and complements, understanding how price changes affect consumption,
- **Week 3:** Applying the rationality model to consumer behaviour: Income and substitution effects, how do we measure the consumer's welfare? Applying the rationality model to firm behaviour, monopoly and competitive firms.
- **Week 4:** Applying the rationality model to labour demand by firms and labour supply by consumers. Applying the rationality model to the labour market, the effect of Robotics and AI on labour demand and supply.
- **Week 5:** Applying the rationality model to saving and investment. How do people make decisions that concern consumption over time? How do individuals choose which investment opportunities to take?
- **Week 6:** Predictably *irrational*? What happens when individuals do not behave according to the rationality model? What happens when people are rational but have other-regarding (social) preferences? How do we think about welfare when individuals are not rational?

### 3. **Block 3:** Strategic interactions and equilibrium

- How do economists think about how individuals interact in strategic situations? How can we make predictions about the outcomes of strategic interactions?
- **Week 7:** *A game* as a model of strategic interactions. Simultaneous games, Strict dominance, Nash equilibrium, computing pure and mixed strategy equilibria.
- **Week 8:** Application of game theory to competition between firms. Oligopoly, Cournot and Bertrand competition, cartels. Application of game theory to electoral competition in politics. Dynamic strategic games and subgame perfection, repeated games.
- **Week 9:** Application of game theory to the economics of discrimination. How can we use game theory to gain insights as to why there is discrimination in society and how can we detect it.
- **Week 10:** Predictably *irrational*? What happens when irrational individuals interact strategically? What happens when rational people with other-regarding (social) preferences interact?