

IB3H9-15 Strategic Games: Thinking rationally about business, policy and real life

24/25

Department

Warwick Business School

Level

Undergraduate Level 3

Module leader

Despoina Alempaki

Credit value

15

Module duration

10 weeks

Assessment

Multiple

Study location

University of Warwick main campus, Coventry

Description

Introductory description

This is an elective module available for WBS and non-WBS students.

The principal module aims are:

1. To develop students' theoretical and practical understanding of strategic decisions using tools drawn from economics, game theory, and psychology.
2. To enable students to interpret social and psychological situations within this framework.
3. To encourage students to take a broad view of policy decisions that have strategic implications, and to predict the consequences of those policies.

[Module web page](#)

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Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

The syllabus will include such topics as:

- Definition of strategic situation and equilibrium.
- Backward induction and rollback equilibrium.
- Strategic moves and the problem of credibility.
- Nash equilibrium in pure and mixed strategies.
- The prisoner's dilemma and the tragedy of the commons.
- Asymmetric information and unravelling.
- Screening and Signalling.
- Matching games and the deferred acceptance algorithm.
- Bargaining and negotiation.
- Evolutionary games.
- Auction theory and the winner's curse.
- Intrapersonal game.

Learning outcomes

By the end of the module, students should be able to:

- Understand and deploy the basic concepts of strategic thinking, in a largely non-mathematical way. These concepts include strategy, Nash equilibrium, prisoner's dilemma, backward induction, winner's curse, informational unravelling, and asymmetric information, costly signalling, and matching.
- Demonstrate logical and critical thinking skills in being able to recognize the potentially counter-intuitive effects of strategic decisions.
- Recognise the links between situations that differ widely in content but share common underlying strategic structures.
- Distinguish between the outcome of logical analysis and 'psychological' analysis of strategic situations.
- Discuss critically the strategic thinking underlying a broad range of decisions taken from all aspects of life.
- Analyse strategic situations and act so as to achieve optimal outcomes, including negotiations with others, and even with your own future selves.

Indicative reading list

Some useful resources:

Dixit, A. K., Reilly, D. & Skeath, S. (2015). Games of Strategy. Norton. (Fourth edition, but any edition is good).

Schelling, T. (1976). Micromotives and Macrobehaviour. Norton.

Binmore, K. (2007). Game theory: A very short introduction. Oxford University Press.

Roth, A. E. (2015). Who Gets What—and Why: The New Economics of Matchmaking and Market Design. Houghton Mifflin Harcourt.

Subject specific skills

Distinguish between the mathematical and economic concept of the correct strategy, and the 'psychological' concept, meaning what might be the correct strategy given what others are likely to do.

Understand how strategic thinking can influence success in all aspects of life.

Transferable skills

Perspective taking.

Logical analysis.

Presentation skills and argumentation.

Study

Study time

Type	Required
Lectures	10 sessions of 1 hour (7%)
Seminars	9 sessions of 1 hour (6%)
Online learning (scheduled sessions)	1 session of 1 hour (1%)
Online learning (independent)	10 sessions of 1 hour (7%)
Private study	48 hours (32%)
Assessment	72 hours (48%)
Total	150 hours

Private study description

Private Study.

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group D7

	Weighting	Study time
Participation	10%	7 hours
Participation via weekly tasks/quizzes posted on the module's forum and overall attendance		

Examination	90%	65 hours
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- Answerbook Green (8 page)
- Students may use a calculator

Assessment group R2

	Weighting	Study time
In-person Examination	100%	
Examination		

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- Answerbook Green (8 page)
 - Graph paper
 - Students may use a calculator

Feedback on assessment

Written feedback on the presentation will be provided, focusing on the key learning outcomes, as well as giving feedback on creativity and the general quality of the presentation.

[Past exam papers for IB3H9](#)

Availability

Courses

This module is Optional for:

- UIBA-MN34 Law and Business Four Year (Qualifying Degree)

- Year 3 of MN34 Law and Business Studies Four Year (Qualifying Degree)
- Year 4 of MN34 Law and Business Studies Four Year (Qualifying Degree)
- UECA-3 Undergraduate Economics 3 Year Variants
 - Year 3 of L100 Economics
 - Year 3 of L100 Economics
 - Year 3 of L100 Economics
 - Year 3 of L116 Economics and Industrial Organization
 - Year 3 of L116 Economics and Industrial Organization
- UECA-4 Undergraduate Economics 4 Year Variants
 - Year 4 of L103 Economics with Study Abroad
 - Year 4 of LM1H Economics, Politics & International Studies with Study Abroad
 - Year 4 of LM1H Economics, Politics & International Studies with Study Abroad
- UECA-LM1D Undergraduate Economics, Politics and International Studies
 - Year 3 of LM1D Economics, Politics and International Studies
 - Year 3 of LM1D Economics, Politics and International Studies
- Year 3 of UIBA-MN31 Undergraduate Law and Business Studies
- Year 3 of UIBA-MN32 Undergraduate Law and Business Studies
- UIBA-MN35 Undergraduate Law and Business Studies with Intercalated Year (3+1)
 - Year 3 of MN35 Law and Business Studies with Intercalated Year (3+1)
 - Year 4 of MN35 Law and Business Studies with Intercalated Year (3+1)
- Year 3 of UMAA-GL11 Undergraduate Mathematics and Economics

This module is Unusual option for:

- UPHA-L1CA Undergraduate Economics, Psychology and Philosophy
 - Year 2 of L1CA Economics, Psychology and Philosophy
 - Year 3 of L1CA Economics, Psychology and Philosophy