

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

20/21

Department

Warwick Business School

Level

Undergraduate Level 3

Module leader

Daniel Read

Credit value

15

Module duration

10 weeks

Assessment

25% coursework, 75% exam

Study location

University of Warwick main campus, Coventry

Description

Introductory description

N/A.

[Module web page](#)

Module aims

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.

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 nonmathematical 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 2 hours (13%)
Tutorials	9 sessions of 1 hour (6%)
Private study	48 hours (32%)
Assessment	73 hours (49%)
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 D4

Weighting Study time Eligible for self-certification

Assessment component

Group Presentation Video (15 CATS)	25%	18 hours	No
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Reassessment component is the same

Assessment component

Online Examination Exam	75%	55 hours	No
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~Platforms - AEP

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- Students may use a calculator
 - Graph paper

Reassessment component is the same

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)
- 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)