

SPINAKEr Summer School course

Forecasting in the Complex, Turbulent World

Course description

This course provides students with knowledge of fundamental methodological issues concerning forecasting in a complex, fast-changing international environment. The course covers some essential methodological issues for the discipline of forecasting, like structuring the forecasting problem, identifying the forecaster's theoretical assumptions, choosing adequate analytical tools, etc. On the other hand, these methodological issues are confronted with the knowledge of psychological mechanisms involved in the process of formulating judgments and opinions about the future (mental frames, heuristics and cognitive biases, cognitive-motivational mechanisms) that may distort its rationality.

Subject's learning outcomes

Outcomes in terms of	Examination methods
Knowledge - Student knows and understands:	
- Pivotal concepts and ideas concerning forecasting in the international relations sphere - The role of psychological underpinnings that determine the way people think about the future (cognitive biases, hidden assumptions behind structuring the problems). - The limits of her/his knowledge when dealing with forecasting tasks.	Short analytical tasks, discussions, active participation
Skills - Student can:	
Properly deal with various forecasting challenges (in terms of the clear formulation of the problem and selection of analytical tools to solve it).	Short analytical tasks
Social competences - Student is ready to:	
Discuss about forecasting in a well-structured way.	Discussions, active participation

Calculation of ECTS points

Activity form	Activity hours*	
Lecture	12	
preparation for classes	24	
preparation for the exam	24	
Student workload	Hours 48	ECTS 2
Workload involving teacher	Hours 12	ECTS 2

*hour means 45 minutes

Study content

This course provides students with knowledge of fundamental methodological issues concerning forecasting in a complex, fast-changing international environment.

At first, participants will learn about adequate ways of formulating forecasting tasks, especially how to structure a problem and select analytical methods and tools to solve them. In this part we will explore some important dimensions for analysis of this kind, like the *type of the task* (do we predict specific point-value or macro-trend), *time perspective* (long-term versus short-term forecasting) or *logical basis* of prediction (theory-based versus unique signal information).

Secondly, we will analyze psychological underpinnings that determine our understanding of the forecasting task (the role of hidden cultural assumptions and 'frames', heuristics and cognitive biases, cognitive-motivational mechanisms). We will discuss the current state of the debate on forecasting and expert judgment, with special interest put on the conceptions of Phillip Tetlock, Daniel Kahneman, Gary Klein, Nicolas Taleb, Bruce Bueno De Mesquita.

Blocks/sections:

1. Forecasting in a fast-changing world – introduction.
2. Structuring the forecasting task – why does it matter?
3. Crucial dimensions in thinking about forecasting tasks.
4. The cultural background of thinking about the future and its impact on experts' performance.
5. Heuristics, cognitive biases, and other motivational mechanisms distort our thinking about the future.
6. Search for adequate, evidence-based forecasting strategies.

Course advanced

Activities	Examination methods
Lecture with multimedia presentation Text analysis Short analytical tasks Discussions	Attendance, active participation and preparing short analytical tasks during classes.

Literature

Obligatory

- Armstrong J.S., *Selecting Forecasting Methods*, in: Armstrong, J.S. (ed.), *Principles of Forecasting: A Handbook for Researchers and Practitioners*, Springer 2001.
- Armstrong J.S., *Standards and Practices for Forecasting*, in: Armstrong, J.S. (ed.), *Principles of Forecasting: A Handbook for Researchers and Practitioners*, Springer 2001.
- Bueno de Mesquita B., *The Predictioneer's Game: Using the Logic of Brazen Self-Interest to See and Shape the Future*, Random House 2009 (chapters: 2-3,8)
- Fischhoff B., *Learning From Experience: Coping With Hindsight Bias and Ambiguity*, in: Armstrong, J.S. (ed.), *Principles of Forecasting: A Handbook for Researchers and Practitioners*, Springer 2001.
- Gregory L. W. & Duran A., *Scenarios and Acceptance of Forecasts*, in: Armstrong, J.S. (ed.), *Principles of Forecasting: A Handbook for Researchers and Practitioners*, Springer 2001.
- Kahneman D., *Thinking Fast, Thinking Slow*, Farrar, Straus and Giroux 2011
- (chapters: 19-24)
- Tetlock P. & Gardner D., *Superforecasting: The Art and Science of Prediction*, Ballantine Books 2016 (chapters: 3-7).

Optional

- Armstrong, J.S. (ed.), *Principles of Forecasting: A Handbook for Researchers and Practitioners*, Springer 2001.

- Bueno de Mesquita B., *The Predictioneer's Game: Using the Logic of Brazen Self-Interest to See and Shape the Future*, Random House 2009.
- Bueno de Mesquita B., *Prediction: How to See and Shape the Future with Game Theory*, Vintage Publishing 2010.
- Foon Khong Y., *Analogies at War: Korea, Munich, Dien Bien Phu and the Vietnam Decisions of 1965*, Princeton University Press 1992.
- Gardner D., *Future Babble: Why Expert Predictions Fail and Why We Believe Them Anyway?* McClelland & Stewart 2010.
- Kahneman D., *Thinking Fast, Thinking Slow*, Farrar, Straus and Giroux 2011.
- Kahneman D., Sibony O. & Sunstein C., *Noise: A Flaw in Human Judgment*, Hachette Book Group 2021.
- Klein G., *Sources of Power: How People Make Decisions*, MIT Press 2017 (20th edition).
- Kruglanski A., *Lay Epistemic and Human Knowledge*, Springer 2013 (1989 edition).
- Kruglanski A., *The Psychology of Closed Mindedness*, Psychology Press 2014.
- Lewis M., *The Undoing Project: A Friendship That Changed Our Minds*, Norton & Company 2016.
- Malmgren P., *Signals. How Everyday Signs Help Us Navigate the World's Turbulent Economy*, Weidenfeld & Nicolson 2016.
- Silver N., *The Signal and The Noise: Why So Many Predictions Fail – But Some Don't*, Penguin Books 2015.
- Surowiecki J., *The Wisdom of Crowds*, Anchor Books 2005.
- Taleb N., *Black Swan: The Impact of Highly Improbable*, Random House & Allen Lane 2007.
- Taleb N., *Fooled by Randomness: The Hidden Role of Chance in Life and in the Markets*, Random House 2001.
- Tetlock, P., *Expert Political Judgment: How Good Is It? How Can We Know?* Princeton University Press 2005.
- Tetlock P. & Gardner D., *Superforecasting: The Art and Science of Prediction*, Ballantine Books 2016.