



COURSE DATASHEET

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| Semester: | 2014/15/1 |
| Course: | Decision support models |
| Code: | VEMKFOB512D |
| Responsible department: | Department of Process Engineering |
| Department code: | MKFO |
| Responsible instructor: | Dr. János Abonyi |

Course objectives:

The course describes how models can support decision making, and presents models that can be effectively used to be an intelligent citizen of the world, to be a clearer thinker, to understand and use data, and to better decide, strategize, and design.

Course content:

- 1: Introduction: Why Model?
- 2: Segregation and Peer Effects + Aggregation
- 3: Decision Models + Thinking Electrons: Modeling People
- 4: Tipping Points + Economic Growth
- 5: Diversity and Innovation
- 6: Markov Processes + Lyapunov Functions
- 7: Coordination and Culture
- 8: Networks
- 9: Randomness and Random Walks
- 11: Mechanism Design
- 12: Learning Models: Replicator Dynamics
- 13: Prediction and the Many Model Thinker

Requirements, evaluation and grading:

Two written examinations covering the whole scope of the course and one individual assignment. The result of the written examinations (max 100 points) is weighted by 30+30%. The individual assignment weighs 40%.

Required and recommended readings:

Page, Scott, Ken Kollman and John Miller, eds. Computational Models of Political Economy. MIT Press, 2002.
Kahneman, Daniel. Thinking, Fast and Slow. New York: Farrar, 2011.
Döntési modellek, HVG kiadó