General Information			
Course name:	Decision Making Methods	ECTS Credits	5
		Semester	Summer

## **Aims**

After completion of this course student should be able to carry out and solve several types of situations. Students will be able to define decision making process and its basic steps and decision tools available for specific situations. Main objective of this course is to provide a wide range of information about supporting tools for decision making processes, their application and future usage in research. Course applies knowledge from decision making theories, game theories, discrete and continuous models, data-mining methods and other.

## Contents

The course is focused on the basic concepts of decision theory, discrete and continuous models of decision-making, multi-criteria models; game theory models and methods in data mining.

- Basic concepts of the theory of decision-making
- Discrete models of decision-making
- Continuous models of decision making
- Discrete multicriteria decision models
- Game theory models
- Models of social choice theory
- Models expert team selection
- Models of bargaining
- Data Mining
- Probabilistic and decision trees
- Nonlinear Programming

### **Evaluation**

Individual discussion 1 hour/week, Short test and conversation

# **Bibliography**

- 1. FIALA, P.: Modely a metody rozhodování. Praha, Oeconomica, 2008
- 2. DLOUHÝ, M. -- FIALA, P.: Úvod do teorie her. Praha, Oeconomica

# Recommended:

- 3. FOTR, J. -- ŠVECOVÁ, L. -- HRŮZOVÁ, H. -- RICHTER, J.: Manažerské rozhodování : postupy, metody a nástroje. Praha, Ekopress
- 4. Ronald A. Howard, Decision Analysis (Stanford University Course) online <a href="http://www.sdrm.copyamericaonline.com/DA/XSDR122">http://www.sdrm.copyamericaonline.com/DA/XSDR122</a> DA Course Reader.pdf
- 5. Hossein Arsham, Tools for Decision Analysis: Analysis of Risky Decisions online http://home.ubalt.edu/ntsbarsh/opre640a/partix.htm