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| **Unit of Study:** | Optimal and Real Decisions | **Subject code:** | GVMOD1KTNC |
| **Institute:**  | Institute of Enterprise Management (1084 Budapest, Tavaszmező str. 15-17.)  | **Credits:**  | 2 |
| **Course type:**  | Full-time | **Language:**  | English | **Term:** | Spring |
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| **Major:**  |  |
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| **Lecturer-in-charge:**  | Viktor Nagy, Ph.D. | **Lecturer(s):**  | Viktor Nagy, Ph.D. |
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| **Prerequisites:**  | None |
| **No. of sessions per week/term:** | Weekly | **Lecture:**  | 1 | **Seminar:**  | 1 | **Lab:**  | 0 | **Consultation:**  | 0 |
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| **Exam/Course assignment:**  | Midterm exam |
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| **Course objectives:**  | Upon completion of this course, students should understand the main concepts and be able to recognize basic biases and distortions in the process of human decision making and know the fundamentals of decision theory. |
| **Course assessment:** | Students are required to attend all classes. Should a student accumulate 5 absences (excused and/or unexcused) out of 14 in the semester class, he/she will not receive academic credits. Students are required to pass two tests. The first one is based on the theory. As a second test students are given a specified problem to be solved using Doctus Knowledge Based System. Students may get homework, which should be handed in until the next lesson or presented in some minutes. |
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| **Week(consultation)** | **Course content** |
| **1.** | Normative and descriptive decision theory |
| **2.** | Rational Choice |
| **3.** | Mathematical Background. Games: Prisoner’s Dilemma, Battle of the Sexes, Leader, Game of Chicken, The Tragedy of the Commons, Rendezvous problem |
| **4.** | Judgement under Uncertainty: Heuristics and Biases |
| **5.** | Prospect Theory |
| **6.** | Creativity and Psychology |
| **7.** | Test 1 |
| **8.** | Decision Support Systems (DSS), The role of the human decision maker in DSS |
| **9.** | Rule-based reasoning (deduction) – Doctus Knowledge Based System |
| **10.** | Rule-based reasoning (deduction) – Doctus Knowledge Based System |
| **11.** | Case-based reasoning (induction) – Doctus Knowledge Based System |
| **12.** | Case-based reasoning (induction) – Doctus Knowledge Based System |
| **13.** | Test 2 |
| **14.** | Makeup exams |
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| **Assessment (method of assessment, make-ups and re-sits):**  | Grade in this course are calculated numerically based on total points/percentages of the two tests although the instructor may raise or decrease it by one grade based on the active/inactive participation in classes or the level of the homework.5 (excellent): 87 – 100 %4 (good): 75 – 86 %3 (satisfactory): 63 – 74 %2 (pass): 51 – 62 %1 (fail): 50 or less %Should a student accumulate 50 or less percentages in a test, an additional chance per test is given to him/her to meet the requirements. |
| **Course completion (written or oral exam, test, etc.):** | Written. |
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| **Compulsory literature:** | This course does not require any textbooks. Students are provided with access to relevant articles and online materials as required. |
| **Recommended literature:**  | Simon, Herbert A. (1959): Theories of Decision-Making in Economics and Behavioral Science. In.: The American Economic Review, Vol. 49, No. 3Tversky, Amos – Kahneman Daniel (1974): Judgement under Uncertanty: Heuristics and Biases. Science, New Series, Vol. 185, No.4157March, James G. (1994): A Primer on Decision Making: How Decisions Happen. New York, NY: The Free PressSchwartz, Barry (2004): The Paradox of Choice. Why more is less. Harper & Collins, New York, USAGladwell, Malcolm (2005): Blink: The Power of Thinking Without Thinking. Little, Brown and Company, New YorkCrainer, Stuart (1999): The 75 Greatest Management Decisions Ever Made: and the 21 of the Worst. Amcaom PublishingHastie, Reid – Dawes, Robyn M. (2010): Rational Choice in an Uncertain World: The Psychology of Judgment and Decision Making. Sage Publications 2nded.Laux, Helmut (2007): Entscheidungstheorie. Springer-Verlag, Berlin Heidelberg, 7. Auflage |
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| **Additional material:**  |  |
| **Quality management aspects:** | TÜV CERT EN ISO 9001:2000 |