Syllabus

Information Life Cycle Management

- **Instructor:** Tibor Voros
- **Credits:** 2 cr
- **Term:** Spring / Summer 2017-2018
- **Course level:** MA/MSc
- **Prerequisites:** None

Course description

Business decisions usually require a variety of information sources. However, including a variety of information sources in decision support impacts the final decision. This course aims to review common methodologies used for business decision support, including business modeling, decision trees and related information process management. All the information used in the above approaches require proper life cycle management: creation, modification, deletion and tracking of information pieces are important. In addition, the information life cycle changes the way how processes are running: participants will have a chance to practice this in a help desk simulation. The digital transformation of organizations based on the information flow and the usage of information for decision support purposes are key concerns in many organizations and this course reviews these key elements. Among other topics, decision trees, information workflow and modelling tools, data structures, well-structured business data and metadata, ILM as policy and process, data warehousing, OLAP, ETL and similar topics will be discussed.

Learning outcomes

INTENDED LEARNING OUTCOMES	ASSESSMENT
Knowledge and Understanding 1. Understand Information Life Cycle Management and its implications 2. Understand how quality information can enhance decision making and organizational performance 3. Describe tools and techniques for business decision support 4. Identify information-related problems and opportunities and identify strategis and tactics for addressing these challenges	Final Exam
Intellectual Skills 1. Recognize critical factors in a problem 2. Develop a structure for analyzing problems 3. Carry out a cogent analysis 4. Present the analysis and insights on a problem	Final Exam and Team Work
Practical Skills 1. Design, build, test, and use meaningful spreadsheets to present and solve quantitative problems 2. Carry out sensitivity, data, regression, and optimization analysis 3. Use pivot tables to aggregate, visualize and drill down into data	Final Exam and Team Work
Transferable Skills 1. Translate descriptions of situations into formal models, and investigate those models in an organized fashion	Final Exam

2.	Extract insights from models, and use those insights to communicate, persuade and motivate change	

Reading list

Recommended Readings

Wayne L. Winston: Data Analysis and Business Modeling (MS Excel 2003 & any of the more recent editions are fine) – a free downloadable e-book will be provided exclusively for the course

Stephen G. Powell and Kenneth R. Baker: Management Science - The Art of Modelling with Spreadsheets (third or more recent editions)

Assessment

Final exam usually consists of two parts.

Part A) Individual, MS Excel-based model building for a business problem, using given data sources (70%)

Part B) Team based exercise, typically either a short case or a situational exercise. Includes information flow modelling, decision making based on information, and recommendations to improve ILM. E.g. the team has to act as consultants to a private health firm, or to a leasing company. Background information with some data is given. The lecturer plays the role of BDM (Business Decision Maker). (30%)

Course schedule and materials for each session

Lect. No	Topic	Additional material, chapters, comments
1.	Introduction: Data & Information. The Information Lifecycle Management. Databases, structured information, data warehouse. Information Strategy & Information Cube. Decision making and information. Decision support in organizations, modeling and other approaches.	Read: Overview of Data Warehousing and OLAP Read: Capgemini Interview with E Brynjolfsson & A McAfee Read: Ford & Firestone case study (see Moodle). Watch: Hans Rosling: Let my dataset change your mind
2.	Decision Trees & Decision Making. Value of Information.	Read: Harvard Freemark Abbey Winery Abdriged (see Moodle).
3.	Modeling in Business. Regression models, Solver distribution and sales questions.	WW 27,28,29,30,32,33,49,53

4.	Modeling practice. Complex business models and predictions in MS Excel.	WW 27,28,29,30,32,33,49,53
5.	Digital transformation: moving from a linear process to an information-centric model. Simulation: Service Center. 2/3-rounds simulation with roleplay (Business Managers, Service Managers, Helpdesk, Technical Specialists). Processes and process development for information flow.	Helpdesk simulation
6.	Processes and process development for information flow. Information flow diagrams. Debriefing simulation. Information flow diagrams.	Helpdesk simulation
7.	Overview. XLSTAT examples: financial modelling, SEM.	
8.	In-class exam (one A4 page may be used).	

Brief Bio

Tibor Vörös has over 20 years experience in both academic and corporate environments. He is an enthusiastic and curious individual, who has explored areas ranging from medical approaches and robotics to corporate financial processes. Tibor's work is mostly related to information systems (e.g. knowledge management, decision making, business intelligence, business analytics) and quantitative areas. He also researched these topics and evaluated corresponding frameworks from the theoretical point of view. Tibor Vörös holds an MSc in Maths, Physics and Information Technology and he is a Harvard Executive Education graduate, also completing a PhD at the University of Hertfordshire. He worked at the Central European University Business School as Senior Lecturer for several years: he also undertook the role of MBA Director among other administrative duties. Tibor has spent considerable time on complex finance-driven business simulations and created unique storyboards to help participants experience real life problems in classroom situations. CEEMAN has selected Mr Vörös as the winner of the Innovation in Course Design category for the CEEMAN Champions' Award 2010. Current research work concentrates on the relationship of organizational culture and information technology. Tibor also took part in various industry campaigns, including the Microsoft Business Productivity Infrastructure Optimization campaign or the Cloud Business Transformation approach.