Enterprise Computing and ERP Systems (Fall 2009)

Goal:
The overall course goal was to create an understanding of analysis, design and use of intra- and inter-organizational enterprise information systems through the use of enterprise modeling.

Content:
Goal modeling, value modeling, resource event agent modeling, event driven business process modeling, e-business models.

Project:
Design the home healthcare startup company as well as its IT support focusing on its goals and processes.

Leader:
Prof. Paul Johannesson

Scientific Communication and Research Methodology (Fall 2009)

Goal:
The goal of this course was to give the ability to locate and summarize scientific literature, understand and apply correct ways of referencing to and citing from scientific literature, discuss and explain the differences between different research methodologies, find relevant literature, analyze, contrast, compare and criticize scientific literature, compose a report with a coherent line of reasoning and assess the quality of scientific literature.

Content:
Finding a research theme, problem and specific question, finding an evaluating scientific literature, reasoning and structuring an argument on different levels, presentation techniques, citing, referencing and paraphrasing, data types, gathering data, data analysis, quantitative methods and analysis, qualitative methods and analysis.

Project:
Research report: "e3-Value Modeling for Mobile Business." The research aims to assess the feasibility of e3-value modeling extension to accommodate the peculiarities of mobile business as well as proposes the extended instruments for modeling.

Leader:
Dr. Harko Verhagen

Decision and Risk Analysis (Spring 2010)

Goal:
The overall aim with the course is to give knowledge on applied decision theory and decision analysis.

Content:
Decision trees, influence diagrams, sensitivity analysis, representation of uncertainty, value of information, multi criteria problems.

Leader:
Prof. Mats Danielson

Model-Driven Development of Components (Spring 2010)

Goal:
The goal of this course was to provide understanding of model-driven architecture and component-based development it also clarified how these can be combined to develop large modular systems.

Content:
Several layers of models for systems construction, model transformations, component based design principles, object oriented principles, basic features of the component technologies EJB, COM+ and .net, architecture of service oriented systems, basic principles behind service orientation (SOA), basic standards for model based development (MOF, CWM, and XMI.)

Leader:
Dr. Martin Henkel / Dr. Erik A Perjons

Philosophy of Science (Winter 2010)

Goal:
The goal of this course was to provide understanding of important events in the history of science, ideal and factual requirements on scientific work, realize how to apply scientific theory to practical problems.

Content:
Science and pseudoscience, rationality, objectivity, values in science, the Duhem-Quine thesis and under determination, induction, prediction, and evidence, confirmation and relevance: Bayesian approaches, models of explanation, laws of nature.

Project:
Paper: “Application of induction in designing scientific research for information systems.”

Leader:
Prof.Magnus Boman

Business Process Design and Intelligence (Spring 2010)

Goal:
The goal of this course was to enable student to explain and apply the central terminology within the area (e.g. case, process, task, activity, role, resource, work list) as well as describe the architecture of a workflow management system (according to the reference model by the Workflow Management Coalition) and account for the basic functionality of contemporary workflow- and business process management systems.

Content:
Petri nets, yawl, bpmn, workflow analysis, workflow patterns, business process redesign, process mining, formal process model from an informal textual domain description, verification techniques to check the soundness of a process model.

Project:
Developing and Implementing a process solution in a BPMs for different cases using YAWL system and Tibco iProcess Suite.

Leader:
Dr. Petia Wohed

Project Management for IT Systems (Fall 2010)

Goal:
The goal of this course was to provide understanding of project management from a theoretical, methodological and practical perspective, including project management's mechanics.

Content:
Project management in ICT, project proposal and the business case, customer oriented approach in project management, project management in developed and developing countries, agile project management handling communication for project management, project management for development in E-learning, E-government, E-health, and E-business.

Project:
Managing a research project with five people which took 15 weeks and producing the report titled:
“Social Healthcare Network in Iran with Focus on Heart Disease.”

Leader:
Dr. Eduardo H Pérez Tobar

Econometrics (Fall 2010)

Goal:
The goal of this course was to provide understanding of theoretical econometric problems through empirical use of economic data and enable students to carry out regressions, interpret regression results and organize empirical data bases.

Content:
Linear regression, limited dependent models, simultaneous equation models, distributed lags and dynamic models, time-series analysis, regression diagnostics.

Project:
The price prediction of ten apartments in Stockholm, based on proposed regression model using STATA software.

Leader:
Prof. Hans Lööf

Processes for IT Production (Fall 2009)

Goal:
The goal of the course was to provide a broad and general perspective on software engineering and processes required for developing, evolving, maintaining and managing software products, projects, and resources.

Content:
Software processes and process models, organizational structures, requirements management, problem management, software testing, risk management, software project management, managing people, software cost estimation, quality management, process improvement, legacy systems.

Project:
Studying various articles related to organizational migration process and suggesting a model for migrating to SOA.

Leader:
Dr. Mira Kajko-Mattsson

Data Warehousing (Winter 2009)

Goal:
The goal of the course was to familiarize the audience with Data Warehouses – their role, utilization and benefits for organizations, as well as architectures and underlying technologies relevant for their development.

Content:
Multidimensional modeling, star join schema, fact table, degenerate dimension, ETL, hierarchy, business intelligence, bitmap indexing, OLAP, Anchor Modeling.

Project:
Creating ETL processes that extract data from the source database of a large electronics chain company in USA and populating a data warehouse based on dimensional modeling principles. Creating an analysis services project in business intelligence development studio and fulfilling BI requirements of the company.

Leader:
Dr. Petia Wohed

Internet Search Techniques and Business Intelligence

Goal:
The goal of this course was to gives an insight into the techniques for information searching and monitoring applied on the Internet.

Content:
Boolean term weight- and vector-space text retrieval models, document similarity measures, morphologic and semantic analysis in text retrieval, Information clustering and presentation, Architecture of a search engine, automatic document summarization, link analysis and PageRank, monitoring tools, natural language processing.

Leader:
Prof. Hercules Dalianis / Dr. Eriks Sneiders