EH2780 IT Management with Enterprise Architecture II, Case Studies 12.0 credits

IT-Management med Enterprise Architecture II, fallstudier

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for EH2780 valid from Autumn 2012

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Electrical Engineering

Specific prerequisites

Single course students: 120hp and English B or equivalent.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The objective of IT Management with Enterprise Architecture II, case studies is to provide knowledge and skills in software system management, i.e., the planning, procurement, development and integration of software systems in an organizational context. The course also considers the underlying industrial processes, e.g. telecommunication, power, or process industries. The course prepares the student both for technology-intensive professions, e.g. system development, and project management within organizations supplying or acquiring industrial information and control systems.

After the course the participants should be able to:

- Characterize and analyze information system management issues such as information system security, modifiability, interoperability, data quality, reliability and usability, IT-Governance and IT business value.
- Compare, choose and motivate the usage of appropriate methods for evaluation of information systems management issues.
- Specify and model information systems and their organizational context.
- Plan and carry an evaluation project through in a practical way under realistic circumstances.
- Critically evaluate and discuss the outcome of analyses related to complex decision situations in information systems management.
- Present an information system evaluation plan and an information system evaluation, both orally and in written form.

Course contents

The course consists of the following content:

- IT management theory – The students will, based on existing research, characterize information system management issues such as information system security, modifiability, interoperability, data quality, reliability and usability, IT-Governance and IT business value. The course consists of a larger project aiming to conduct a case study. Each case study will focus on a specific issue related to a real problem at a company.
- IT management practice - The students will, based on existing research, analyze an information system management issue for instance information system security, modifiability, interoperability, data quality, reliability and usability, IT-Governance and IT business value. The analysis will be performed on a real industrial problem.
- Analysis formalism – The students will construct an analysis framework for a given information system management issue. For instance, breaking the goal information security down into measurable and well-defined parts with a causal effect on the goal. And then calculate the result of information security based on empirical data collected at a given company.

- Enterprise architecture modeling – The students will, given previously gained knowledge in the area of enterprise architecture modeling, create a modeling language specifically designed to provide the proper information for the analysis. The students will then create instantiated models based on the empirical data collected in their case study at a company.

- Case study methodology – The students should, based on case study methodology, plan and carry an information system evaluation project through focusing on a specific management issue in a given decision. Each case study will be carried through at a real company.

The main deliverable in IT Management with Enterprise Architecture II, case studies consists of an enterprise architecture model instantiated based on the modeling language (metamodel) specifically designed for analysis of a chosen IT management issue. The modeling language and analysis formalism are designed based on existing research and the instantiated model is built on empirical data collected at a company.

Disposition

The course consists of lectures and seminars where the theoretical aspects are presented and discussed. A major part of the course is the case study and this is carried through in industry. The case study is planned and presented in written reports and seminar presentations.

Course literature

Annonseras slutgiltigt vid kursstart.

Exempelvis:

Johnson, P. och Ekstedt, M.: Enterprise Architecture – Models and Analyses for InformationSystems Decision Making, Studentlitteratur, 2007, ISBN 978-91-44-02752-4.

Yin, Robert K., Case Study Research, Design and Methods, Edition 3 (4), Sage Publications, 2003, ISBN 0-7619-2553-8.

Samt vid kurstillfälle utdelat material i form av forskningsartiklar och kapitel från utvalda böcker.

För de som inte har läst en kurs i Projektstyrning kan the Handbook for small projects av Eriksson, M. och Lilliesköld, J. komma till användning.

För de som inte har läst en kurs i Enterprise Architecture kan följande komma till användning, Lankhorst et al., Enterprise Architecture at Work: Modeling, Communication, and Analysis, Springer, 2005.

Equipment

No requirements, but a laptop can be of use.

Examination

- PRO1 - Project Plan, 2.0 credits, grading scale: P, F
- PRO2 - Investigation Plan, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO3 - Final Report, 5.0 credits, grading scale: A, B, C, D, E, FX, F
- SEM1 - Lecture Series, 2.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Examination in the course is focused on three reports a project plan, an investigation plan, and a final report, as well as mandatory attendance at lectures and seminars.

Other requirements for final grade

Attendance, as well as approved reports and presentations.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.