

Strategic Organisational Application of IT - Workflow and Knowledge Management

Programme course

6 credits

Strategisk organisatorisk IT-användning - workflow
och knowledge management

TDEI21

Valid from: 2021 Spring semester

Determined by
Board of Studies for Industrial
Engineering and Logistics

Date determined
2020-09-29

Main field of study

Industrial Engineering and Management

Course level

Second cycle

Advancement level

A1X

Course offered for

- Master of Science in Industrial Engineering and Management - International
- Master of Science in Industrial Engineering and Management
- Master of Science in Information Technology
- Design and Product Development, M Sc in Engineering

Prerequisites

Have basic insights in organisation and business administration.

Intended learning outcomes

In Strategic Application of IT - workflow och knowledge management we focus on the more or less structured communication processes within the organisation. By learning more about participation and influence in development and implementation, group roles, incentives, responsibilities and roles in knowledge management, you build an understanding that can help you turn visions and strategies into action. But it is not just the premeditated and planned that can be of strategic importance. At least as important is that you learn to recognise spontaneous and temporary initiatives and developments that warrant attention and support.

The purpose is to give you insights enabling you to make nuanced assessments of the potential behind the hype.

When having completed the course, you should be able to:

- 1) assess the potential of a strategic IT application supporting processes within the organisation
- 2) find and interpret academic articles of relevance to a strategic application of IT, and
- 3) orally and in writing present your own analyses and constructively contribute to and discuss others' analyses.

Course content

The basic idea of the course is to discuss strategic importance, business impact, current applications and commercial potential, based on current trends. Using case studies and the experience of the participants, we investigate the chain from vision to realisation. Workflow and Knowledge management are two central perspectives in the analysis of applications of IT. Reading and discussing published empirical research is a recurring activity in the course. The investigating projects performed by the participants, their literature searches and the interaction between the workgroups form central parts of the knowledge management theme in the course.

Teaching and working methods

The course consists of lectures and seminars - traditional and virtual. The participants' own investigating projects, literature searches and the interaction between the workgroups form central parts of the knowledge management theme in the course.

Examination

UPG2	Seminars	1 credits	U, G
PRA1	Project	3 credits	U, 3, 4, 5
UPG4	Hand-in assignments	2 credits	U, 3, 4, 5

To pass the course, the student should actively participate in seminars, have completed reflection reports concerning literature and teaching cases, have participated (well prepared) in the discussion of course literature, teaching cases and the other groups' projects, and have actively participated in a completed project that has been presented orally and in writing in line with the directions given in the course.

Grades

Four-grade scale, LiU, U, 3, 4, 5

Other information

About teaching and examination language

The teaching language is presented in the Overview tab for each course. The examination language relates to the teaching language as follows:

- If teaching language is Swedish, the course as a whole or in large parts, is taught in Swedish. Please note that although teaching language is Swedish, parts of the course could be given in English. Examination language is Swedish.
- If teaching language is Swedish/English, the course as a whole will be taught in English if students without prior knowledge of the Swedish language participate. Examination language is Swedish or English (depending on teaching language).
- If teaching language is English, the course as a whole is taught in English. Examination language is English.

Other

The course is conducted in a manner where both men's and women's experience and knowledge are made visible and developed.

The planning and implementation of a course should correspond to the course syllabus. The course evaluation should therefore be conducted with the course syllabus as a starting point.

Department

Institutionen för ekonomisk och industriell utveckling

Director of Studies or equivalent

Daniel Ellström

Examiner

Alf Westelius

Course website and other links

<http://www.iei.liu.se/indek/utbildning/ekonomiska-informationssystem/tdei21?l=sv>

Education components

Preliminary scheduled hours: 48 h

Recommended self-study hours: 112 h

Course literature

Huvudsakligen empiriskt grundade artiklar som presenterar aktuell forskning inom området. Den slutgiltiga läslistan bestäms inför och under kursen, delvis av deltagarna själva. Ett exempel på hur litteraturlistan kan se ut ges nedan: 1) Bensaou, M. & Earl, M. (1998) The right mind-set for managing information technology. *Harvard Business Review* 76 (5), 119-128. 2) Carr, N. G. (2003) IT Doesn't matter. *Harvard Business Review* 81 (5) 41-49. 3) Brown, J.S.; Hagel, J.III; Varian, H; Carr, N. (2003) Does IT Matter? Letters to the Editor. *Harvard Business Review* 81 (7), 109-112. 4) Markus, M.L. & Benjamin R.I. (1997) The magic bullet theory in IT-enabled transformation, *Sloan Management Review* 1997 Winter, 55-68. 5) Choi, Byounggu and Lee, Heeseok, (2003) An empirical investigation of KM styles and their effect on corporate performance, *Information & Management* 6) Ikujiro Nonaka and Ryoko Toyama (2003) The knowledge-creating theory revisited: knowledge creation as a synthesizing process, *Knowledge Management Research & Practice*, Vol. 1, pp. 2–10. 7) Christensen, Peter Holdt (2007) Knowledge sharing: moving away from the obsession with best practices. *Journal of Knowledge Management*, 11(9) 36-47. 8) Daft, Richard L.; Robert H. Lengel (1986) Organizational Information Requirements, Media Richness and Structural Design. *Management Science*; May 1986, Vol. 32 Issue 5, p554, 18p. 9) Ojetanki K. Ngwenyama; Allen S. Lee (1997) Communication Richness in Electronic Mail: Critical Social Theory and the Contextuality of Meaning. *MIS Quarterly*, Vol. 21, No. 2. (Jun., 1997), pp. 145-167. 10) Newell, Sue, Huang, J.C., Galliers Robert D., Pan, S.L. (2003) Implementing enterprise resource planning and knowledge management systems in tandem: fostering efficiency and innovation complementarity. *Information and Organization* Vol. 13, No. 1, pp. 25-52. 11) Newell, Sue, Pan, S., Galliers, Robert, Huang, J. (2001) The myth of the boundaryless organization: Limitations of collaborative technologies in global firms. *Communications of the ACM*, Vol. 44, No 12, pp. 74–76. 12) Pan, S.L., Leidner, D.E. (2003) Bridging communities of practice with information technology in pursuit of global knowledge sharing. *Journal of Strategic Information Systems* 12 (1) 71–88. 13) Suchman, Lucy (1995) Making Work Visible. *Communications of the ACM*, September 1995, Vol. 38, No. 9, pp. 56-64. 14) Alf Westelius and Pär Mårtensson (2004) The Midas Touch in Knowledge Management Projects – Beware, Your Wish Could Come True, *The Electronic Journal of Knowledge Management*, 2(2) 35-44, available online at www.ejkm.com. 15) Westelius, Alf (2006) Muddling through – the life of a multinational, strategic enterprise systems venture at BT Industries. *Linköping Electronic Articles in Computer and Information Science*, Vol. 10, No. 1. Linköping University Electronic Press, Linköping, Sweden. 16) Alf Westelius and Pablo Valiente (2006) Bringing the Enterprise System to the Frontline - Intertwining Computerised and Conventional Communication at BT Europe. In *Unwired Business: Cases in Mobile Business*, Stuart J. Barnes and Eusebio Scornavacca (Eds.), IRM Press, Hershey. 17) Ke, Weiling; Wei, Kwok Kee (2004) SUCCESSFUL E-GOVERNMENT IN SINGAPORE, *Communications of the ACM*; Jun2004, Vol. 47 Issue 6, p95, 5p

Common rules

Course syllabus

A syllabus must be established for each course. The syllabus specifies the aim and contents of the course, and the prior knowledge that a student must have in order to be able to benefit from the course.

Timetabling

Courses are timetabled after a decision has been made for this course concerning its assignment to a timetable module.

Interrupting a course

The vice-chancellor's decision concerning regulations for registration, deregistration and reporting results (Dnr LiU-2015-01241) states that interruptions in study are to be recorded in Ladok. Thus, all students who do not participate in a course for which they have registered must record the interruption, such that the registration on the course can be removed. Deregistration from a course is carried out using a web-based form: <https://www.lith.liu.se/for-studenter/kurskomplettering?l=en>.

Cancelled courses

Courses with few participants (fewer than 10) may be cancelled or organised in a manner that differs from that stated in the course syllabus. The Dean is to deliberate and decide whether a course is to be cancelled or changed from the course syllabus.

Guidelines relating to examinations and examiners

For details, see Guidelines for education and examination for first-cycle and second-cycle education at Linköping University, Dnr LiU-2019-00920 (<http://styrdokument.liu.se/Regelsamling/VisaBeslut/917592>).

An examiner must be employed as a teacher at LiU according to the LiU Regulations for Appointments, Dnr LiU-2017-03931 (<https://styrdokument.liu.se/Regelsamling/VisaBeslut/622784>). For courses in second-cycle, the following teachers can be appointed as examiner: Professor (including Adjunct and Visiting Professor), Associate Professor (including Adjunct), Senior Lecturer (including Adjunct and Visiting Senior Lecturer), Research Fellow, or Postdoc. For courses in first-cycle, Assistant Lecturer (including Adjunct and Visiting Assistant Lecturer) can also be appointed as examiner in addition to those listed for second-cycle courses. In exceptional cases, a Part-time Lecturer can also be appointed as an examiner at both first- and second cycle, see Delegation of authority for the Board of Faculty of Science and Engineering.

Forms of examination

Principles for examination

Written and oral examinations and digital and computer-based examinations are held at least three times a year: once immediately after the end of the course, once in August, and once (usually) in one of the re-examination periods. Examinations held at other times are to follow a decision of the board of studies.

Principles for examination scheduling for courses that follow the study periods:

- courses given in VT1 are examined for the first time in March, with re-examination in June and August
- courses given in VT2 are examined for the first time in May, with re-examination in August and October
- courses given in HT1 are examined for the first time in October, with re-examination in January and August
- courses given in HT2 are examined for the first time in January, with re-examination in March and in August.

The examination schedule is based on the structure of timetable modules, but there may be deviations from this, mainly in the case of courses that are studied and examined for several programmes and in lower grades (i.e. 1 and 2).

Examinations for courses that the board of studies has decided are to be held in alternate years are held three times during the school year in which the course is given according to the principles stated above.

Examinations for courses that are cancelled or rescheduled such that they are not given in one or several years are held three times during the year that immediately follows the course, with examination scheduling that corresponds to the scheduling that was in force before the course was cancelled or rescheduled.

When a course is given for the last time, the regular examination and two re-examinations will be offered. Thereafter, examinations are phased out by offering three examinations during the following academic year at the same times as the examinations in any substitute course. If there is no substitute course, three examinations will be offered during re-examination periods during the following academic year. Other examination times are decided by the board of studies. In all cases above, the examination is also offered one more time during the academic year after the following, unless the board of studies decides otherwise.

If a course is given during several periods of the year (for programmes, or on different occasions for different programmes) the board or boards of studies determine together the scheduling and frequency of re-examination occasions.

Retakes of other forms of examination

Regulations concerning retakes of other forms of examination than written examinations and digital and computer-based examinations are given in the LiU guidelines for examinations and examiners, <http://styrdokument.liu.se/Regelsamling/VisaBeslut/917592>.

Registration for examination

Until January 31 2021, the following applies according to previous guidelines: In order to take an written, digital or computer-based examination student must register in advance at the Student Portal during the registration period, which opens 30 days before the date of the examination and closes 10 days before it. Candidates are informed of the location of the examination by email, four days in advance. Students who have not registered for an examination run the risk of being refused admittance to the examination, if space is not available.

From February 1 2021, new guidelines applies for registration for written, digital or computer-based examination, Dnr LiU-2020-02033 (<https://stydokument.liu.se/Regelsamling/VisaBeslut/622682>).

Symbols used in the examination registration system:

** denotes that the examination is being given for the penultimate time.

* denotes that the examination is being given for the last time.

Code of conduct for students during examinations

Details are given in a decision in the university's rule book:
<http://stydokument.liu.se/Regelsamling/VisaBeslut/622682>.

Retakes for higher grade

Students at the Institute of Technology at LiU have the right to retake written examinations and digital and computer-based examinations in an attempt to achieve a higher grade. This is valid for all examination components with code "TEN", "DIT" and "DAT". The same right may not be exercised for other examination components, unless otherwise specified in the course syllabus.

A retake is not possible on courses that are included in an issued degree diploma.

Grades

The grades that are preferably to be used are Fail (U), Pass (3), Pass not without distinction (4) and Pass with distinction (5).

- Grades U, 3, 4, 5 are to be awarded for courses that have written or digital examinations.
- Grades Fail (U) and Pass (G) may be awarded for courses with a large degree of practical components such as laboratory work, project work and group work.
- Grades Fail (U) and Pass (G) are to be used for degree projects and other independent work.

Examination components

The following examination components and associated module codes are used at the Faculty of Science and Engineering:

- Grades U, 3, 4, 5 are to be awarded for written examinations (TEN) and

digital examinations (DIT).

- Examination components for which the grades Fail (U) and Pass (G) may be awarded are laboratory work (LAB), project work (PRA), preparatory written examination (KTR), digital preparatory written examination (DIK), oral examination (MUN), computer-based examination (DAT), home assignment (HEM), and assignment (UPG).
- Students receive grades either Fail (U) or Pass (G) for other examination components in which the examination criteria are satisfied principally through active attendance such as tutorial group (BAS) or examination item (MOM).
- Grades Fail (U) and Pass (G) are to be used for the examination components Opposition (OPPO) and Attendance at thesis presentation (AUSK) (i.e. part of the degree project).

In general, the following applies:

- Mandatory course components must be scored and given a module code.
- Examination components that are not scored, cannot be mandatory. Hence, it is voluntary to participate in these examinations, and the voluntariness must be clearly stated. Additionally, if there are any associated conditions to the examination component, these must be clearly stated as well.
- For courses with more than one examination component with grades U,3,4,5, it shall be clearly stated how the final grade is weighted.

For mandatory components, the following applies: If special circumstances prevail, and if it is possible with consideration of the nature of the compulsory component, the examiner may decide to replace the compulsory component with another equivalent component. (In accordance with the LiU Guidelines for education and examination for first-cycle and second-cycle education at Linköping University, <http://styrdokument.liu.se/Regelsamling/VisaBeslut/917592>).

For written examinations, the following applies: If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it. If the coordinator has instead recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives. (In accordance with the LiU Guidelines for education and examination for first-cycle and second-cycle education at Linköping University, <http://styrdokument.liu.se/Regelsamling/VisaBeslut/917592>).

Reporting of examination results

The examination results for a student are reported at the relevant department.

Plagiarism

For examinations that involve the writing of reports, in cases in which it can be assumed that the student has had access to other sources (such as during project work, writing essays, etc.), the material submitted must be prepared in accordance

with principles for acceptable practice when referring to sources (references or quotations for which the source is specified) when the text, images, ideas, data, etc. of other people are used. It is also to be made clear whether the author has reused his or her own text, images, ideas, data, etc. from previous examinations, such as degree projects, project reports, etc. (this is sometimes known as “self-plagiarism”).

A failure to specify such sources may be regarded as attempted deception during examination.

Attempts to cheat

In the event of a suspected attempt by a student to cheat during an examination, or when study performance is to be assessed as specified in Chapter 10 of the Higher Education Ordinance, the examiner is to report this to the disciplinary board of the university. Possible consequences for the student are suspension from study and a formal warning. More information is available at <https://www.student.liu.se/studenttjanster/lagar-regler-rattigheter?l=en>.

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU’s rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.