INFN25, Informatics: IT, Innovation and Sustainability, 7.5 credits

Informatik: IT, innovation och hållbar utveckling, 7,5 högskolepoäng

Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by The Board of the Department of Informatics on 2013-09-20 and was last revised on 2016-09-23. The revised syllabus applies from 2016-09-23, autumn semester 2016.

General Information

The course can be taken as part of the MSc Programme in Information Systems, or as a separate course.

Language of instruction: English

Main field of studies	Depth of study relative to the degree requirements
Informatics	A1N, Second cycle, has only first-cycle course/s as entry requirements
Information Systems	A1N, Second cycle, has only first-cycle course/s as entry requirements

Learning outcomes

The objective of this course is for the students to achieve a profound understanding of the relationship between Information Technology (IT), innovation and sustainability. The students will acquire theoretical knowledge about each of these areas, with specific relation to Information Systems (IS) research. They will also, on completing this course, be able to employ this knowledge for designing, planning and evaluating artefacts and guidelines of Green IT. Moreover, the students will be introduced to a wide range of empirical examples and real world cases, where sustainability and IT are important.

Knowledge and understanding

For a pass on the course, the student shall demonstrate knowledge of and understanding of

- essential perspectives on technology, information technology, innovation, sustainability, corporate social responsibility, user innovation, and open source
- the social, economical and political nature of defining sustainability and innovation
- the social, economical and political aspects of shaping, developing and implementing IT
- the relationship between ISD (Information Systems Development), sustainability and innovation
- key IS/IT drivers for sustainability
- how IS/IT is used to accommodate sustainability (such as Green IT, telematics, and logistics)
- how green IT is planned, designed and developed.

Competence and skills

For a pass on the course, students shall demonstrate competence and skills individually or in groups to

- develop and evaluate guidelines for sustainable IS/IT
- plan and critically assess organizational initiatives to become more sustainable
- argue, both orally and in writing, for different positions on sustainability and innovation based on theoretical perspectives and current debates
- develop concrete and executable plans for the implementation of IT innovation
- evaluate existing guidelines and artefacts of Green IT
- plan and evaluate new models and methods for design of Green IT.

Judgement and approach

For a pass on the course, students shall demonstrate the ability to

- analyse and discuss the relationship between IS/IT, sustainability and innovations
- critically assess particular IT-artefacts (and cases) with regard to their environmental and social impact
- assess critically and constructively various arguments for and against sustainability and innovation
- creatively collaborate with 'real world' cases
- reflect on their individual progress
- critically relate to 'cutting edge' research and development in the field of IS/IT and sustainability
- discuss and analyse different positions on business ethics and corporate social responsibility
- critically address the way in which corporations relate to and integrate questions of sustainability.

Course content

The course will address central themes related to IT, innovation and sustainability. It will do so by studying and analysing literature, news articles and empirical examples. In addition, students will be introduced to a number of central theoretical perspectives, including accounts on corporate social responsibility and business ethics.

The following topics will be covered:

- theories of technology and IT
- perspectives dealing with technology, economy and innovation
- historical and current debates on sustainability
- business ethics, Green IT, Corporate Social Responsibility
- design perspectives on innovation and Green IT
- development, planning and evaluation of existing examples of Green IT
- 'real world' cases and examples where Green IT and sustainable solutions have either succeeded or failed
- the complex network of interest groups and how these influence the development and distribution of Green IT.

Course design

Teaching includes seminars, workshops, lectures and guest lectures.

The course includes compulsory components, which are stated in the schedule.

Assessment

The assessment is based on assignments, essay and seminars.

Re-examinations are offered in close conjunction with the first examination.

Cheating such as plagiarism, fabrication and falsification is considered a serious offence in higher education (see Chapter 8 of the Higher Education Ordinance). The disciplinary measures that may be taken as a result of such offences are caution or suspension for a limited period of time from the University.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, E, D, C, B, A.

Grade (Definition) Points or percentage out of maximum points. Characteristic.

A (Excellent) 85-100. A distinguished result that is excellent with regard to theoretical depth, practical relevance, analytical ability and independent thought.

B (Very good) 75-84. A very good result with regard to theoretical depth, practical relevance, analytical ability and independent thought.

C (Good) 65-74. The result is of a good standard with regard to theoretical depth, practical relevance, analytical ability and independent thought and lives up to expectations.

D (Satisfactory) 55-64. The result is of a satisfactory standard with regard to theoretical depth, practical relevance, analytical ability and independent thought.

E (Sufficient) 50-54. The result satisfies the minimum requirements with regard to theoretical depth, practical relevance, analytical ability and independent thought, but not more.

F (Fail) 0-49. The result does not meet the minimum requirements with regard to theoretical depth, practical relevance, analytical ability and independent thought.

To pass the course, the students must have been awarded the grade of E or higher.

Grading rules and definitions

Grades are awarded according to a graded scale from A (highest) to F (lowest), with E as the minimum passing grade.

When the exam/assignment is not graded, the grades G (Pass) or F (Fail) will be applied.

Course grades

When calculating course grades, the graded components will be weighted according to the following formula:

The number of credits for the exam is multiplied with the exam score. The total value is then divided by the total number of credits for the exams/assignments included. The resulting average is then rounded off to the nearest whole number. The number indicates the relevant course grade in accordance with the grading definitions above.

For exams/assignments which are graded and scored, the grades A to F will be used in accordance with the grading definitions above. The exam score will be used directly in the calculation.

For exams/assignments which are graded but not scored, the grades A to F will be used and converted as follows: A = 92, B = 80, C = 70, D = 60, E = 52.

Exams/assignments which are not graded but awarded with G (Pass) or F (Fail) will not be included in the calculation of the course grade.

Entry requirements

General and completed courses: "Informatics: Introduction to Information Systems, 1-30 cr", "Informatics: Level 2, 31-60 cr" and "Informatics: Bachelor Degree Project, 15 cr" and further 15 credits informatics/information systems at Bachelor level or the equivalent. English 6/English Course B.

An exception for the general entry requirement in Swedish will be granted when the course is given in English.

Further information

The Director of the MSc Programme in Information Systems has on 1 June 2011 decided that this course may be included in the programme.

The course may not be credited towards a degree together with INFN14 or equivalent courses.

It is compulsory to attend the introduction meeting, where a roll call will be taken. Absence without notification means that the admitted student will lose his/her seat on the course.

For transitional provisions with regard to previous courses, please contact the study advisor for an individual assessment.

If the course is discontinued, there may be limited opportunities for re-examination. Please contact the study advisor for information.

Amendments

2012-05-03: General editorial changes.
2016-06-03: New grading rules from Autumn term 2016.

2016-09-23: New set of exams from Autumn term 2016.

Subcourses in INFN25, Informatics: IT, Innovation and Sustainability

Applies from H16

1601   Assignments and presentations, 2,5 hp
        Grading scale: Fail, Pass
        Group assignments.
1602   Essay, 4,0 hp
        Grading scale: Fail, E, D, C, B, A
        Individual assignment.
1603   Seminars, 1,0 hp
        Grading scale: Fail, Pass
        Individual assignments.

Applies from H11

1101   Group Assignment and Presentation, 3,0 hp
        Grading scale: Fail, E, D, C, B, A
1102   Individual Assignment (Essay), 3,5 hp
        Grading scale: Fail, E, D, C, B, A
1103   Seminars, 1,0 hp
        Grading scale: Fail, Pass