School of Economics and Management

SYSA21, Informatics: Introduction to Information Systems, 30 credits

Informatik: Introduktion till informationssystem, 30 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus was approved by The Board of the Department of Informatics on 2018-03-05 and was last revised on 2022-06-23. The revised syllabus applies from 2022-08-29, autumn semester 2022.

General Information

The course makes up the first semester of the BSc programme in Design of Information Systems or it can be taken as a freestanding course.

Language of instruction: Swedish and English
Teaching is mostly in Swedish but there may also be teaching in English. The course literature is mainly in English.

Main field of studies	Depth of study relative to the degree requirements
Information Systems	G1N, First cycle, has only upper-secondary level entry requirements
Informatics	G1N, First cycle, has only upper-secondary level entry requirements

Learning outcomes

On completion of the course, the student shall have obtained basic knowledge of theories and methods in the field of information systems (IS). Furthermore, the student shall have attained a basic ability to independently and critically perform system development and develop software systems. The student shall also have acquired basic knowledge and skills with regard to report writing and project work for IS design.

Knowledge and understanding
In order to pass the course, the student must be able to demonstrate knowledge of

and understanding of

- the basic meaning of the terms information, data, information systems, information technology (IT) and information and communication technology (ICT),
- design as a problem solving process at a basic level,
- different types of IS and ICT and their usage,
- the organisational context supported by IS, especially business processes,
- simple concepts and principles of systems analysis and modelling,
- IS design as an area of activity,
- programming as part of IS development,
- problem-solving at a basic level,
- software development as an area of activity,
- project work as a method for IS development,
- basic concepts, models and principles of business administration that are relevant to informatics.

Competence and skills

In order to pass the course, the students must be able to demonstrate competence and skills individually or in groups to

- design a limited information system for an enterprise,
- make a simple analysis of an enterprise from a process perspective,
- make a simple analysis of the aim, goal and organisation of an enterprise,
- produce and defend a delimited study of an assigned topic,
- correctly describe simple design proposals in modelling language,
- produce and test software in the form of modules within or in connection with a system,
- apply basic analysis models to simple enterprise systems,
- apply basic principles of analysis and modelling in order to identify functions and needs and suggest, explain and present an IS design for this purpose,
- implement parts of a limited information system as software,
- design, present and argue for an IS design,
- critically analyse the work within an IS design project,
- use simple models of economic analysis and calculation for the valuation of investments in IS/IT,
- use simple models of financial analysis linked to ERP (Enterprise Resource Planning),
- execute assignments within given time frames.

Judgement and approach

In order to pass the course, the students must be able to demonstrate the ability to

- account retrospectively and reflectingly for theories and processes used and connect them to relevant components, tasks and assignments on the course,
- reflectingly account for advantages and disadvantages experienced within group work on IS design,
- independently reflect on their own learning process and assess their own change process and goal attainment,
- assess economic consequences of investments in IS/IT.

Course content

The course deals with

- information systems as a subject,

- academic writing,
- information and communication systems,
- enterprises and business,
- business, IT and digitalisation,
- systems analys and modelling,
- concept and business modelling,
- software development,
- data modelling,
- transformation and programming,
- information systems project,
- organisation and business,
- process and business modelling.

Modules

Information systems as a subject,
Business, IT and digitalisation,
Systems analysis and modelling,
Software development,
IS project.

Course design

The teaching consists of lectures, lessons, seminars, workshops, laboratory sessions and supervision.

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

Assessment

The assessment is based on assignments, written exams and an IS project.

Assessed components including documentation and written reflections are compiled in the student's learning portfolio.

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

The test and course grades are determined by the course examiner. The examiner is entitled to change the grades given by the teachers on the course if this does not violate Chapter 6, Section 24 of the Higher Education Ordinance (1993:100).

Academic misconduct such as cheating, plagiarism, fabrication and falsification is considered a serious offence in higher education (see Chapter 10 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 (and all the faculties of the university).

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

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.

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

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

C (Good) 65-74 points/percent. 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 points/percent. The result is of a satisfactory standard with regard to theoretical depth, practical relevance, analytical ability and independent thought.

E (Sufficient) 50-54 points/percent. 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 points/percent. 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 courses corresponding to the following Swedish Upper Secondary School Programs: Civics 1b/1a1+1a2, English 6.

Further information

SYSA21 may not be included in a degree together with SYSA11, INFA16 or the equivalent.

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

2019-04-04: Updated teaching language to Swedish and English.
2022-06-23: New reading list from Autumn term 2022.

Subcourses in SYSA21, Informatics: Introduction to Information Systems

Applies from H18

1801   Information Systems as a Subject, Assignments, 2,0 hp
        Grading scale: Fail, Pass
        Individual assignments with focus on ICT.

1802   Information Systems as a Subject, Paper, 3,0 hp
        Grading scale: Fail, E, D, C, B, A
        Group paper in the subject area of information systems.

1803   Business, IT and Digitalisation, Assignments, 3,0 hp
        Grading scale: Fail, Pass
        Individual assignments with focus on business, management, IT and
        digitalisation.

1804   Business, IT and Digitalisation, Case Assignments, 3,0 hp
        Grading scale: Fail, Pass
        Group assignments. Case.

1805   Systems Analysis and Modelling, Written Exam, 3,0 hp
        Grading scale: Fail, E, D, C, B, A
        Individual exam with focus on modelling.

1806   Systems Analysis and Modelling, Assignments, 3,0 hp
        Grading scale: Fail, E, D, C, B, A
        Group assignments with focus on modelling.

1807   Software Development, Written Exam, 3,0 hp
        Grading scale: Fail, E, D, C, B, A
        Individual exam with focus on object oriented programming in Java.

1808   Software Development, Assignments, 3,0 hp
        Grading scale: Fail, Pass
        Individual assignments with focus on object oriented programming in Java.

1809   IS Project, ICT- and business assignment, 2,0 hp
        Grading scale: Fail, E, D, C, B, A
        Group assignment. Project work focused on ICT and business.

1810   IS Project, Process and Modelling Assignment, 2,0 hp
        Grading scale: Fail, E, D, C, B, A
        Group assignment. Project work focused on processes and modelling.

1811   IS Project, Software Development Assignment, 2,0 hp
        Grading scale: Fail, E, D, C, B, A
        Group assignment. Project work focused on software development.

1812   Learning Portfolio and Assignments, 1,0 hp
        Grading scale: Fail, Pass
        Individual assignment. Reflection of the learning process for all examination
        parts of the course.