School of Economics and Management

SYSA11, Informatics: Introduction to Information Systems, 30 credits

Informatik: Introduktion till informationssystem, 30 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus is an old version, approved by The Board of the Department of Informatics on 2013-09-20 and was last revised on 2017-03-24. . The revised syllabus applied from 2017-08-29. , autumn semester 2017.

General Information

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

Language of instruction: Swedish
Required reading in English may be included.

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

For a pass on the course, the student shall 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

For a pass on the course, students shall 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

For a pass on the course, students shall 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.

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 courses corresponding to the following Swedish Upper Secondary School Programs: English 6, Mathematics 3b/3c and Social Studies 1b/1a1+1a2.

Further information

SYSA11 may not be included in a degree together with SYSA01, 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

2012-03-09: In the third point under Knowledge and understanding - ICT (information and communication systems) - has been changed to- ICT (information and communication technology). Editorial changes.
2012-04-13: Addition of Stanelius, M. in the reading list.
2012-05-03: General editorial changes.
2013-06-11: The exam "IS project design" is renamed to "IS project software development" (no changes to content).
2015-05-13: New learning outcome under Competence and skills "execute assignments within given time frames". The module "Introduction to Information Systems" is renamed "Information Systems as a Subject". New set of exams from Autumn term 2015.
2015-12-04: Added that the course includes compulsory components and that attendance on the introduction meeting is compulsory.
2016-04-01: The module "Information and Communication systems" is merged with the module "Information systems as a subject". Updated reading list and new set of exams from Autumn term 2016.
2016-06-03: New grading rules from Autumn term 2016.
2016-09-23: Changed name of module from "Business management and information systems" to "Business, IT and digitalisation" and changed set of exams from Autumn term 2016.
2016-10-28: Updated the syllabus so that it can be announced as an freestanding course, ie added Informatics as the main field of studies and deleted information indicating that the course can only be read in the BSc programme in Design of Information Systems.
2016-12-09: Removed Mathematics from the requirements.
2017-03-24: Updated reading list from Autumn term 2017.

Subcourses in SYSA11, Informatics: Introduction to Information Systems

Applies from H16

1601 Information Systems as a Subject, Assignments, 2,0 hp
Grading scale: Fail, Pass
Individual assignments with focus on ICT.
1602 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.
1603 Business, IT and Digitalisation, Assignments, 3,0 hp
Grading scale: Fail, Pass
Individual assignments with focus on business, management, IT and digitalisation.
1604 Business, IT and Digitalisation, Case Assignments, 3,0 hp
Grading scale: Fail, Pass
Group assignments. Case.
1605 Systems Analysis and Modelling, Written Exam, 3,0 hp
Grading scale: Fail, E, D, C, B, A
Individual exam with focus on modelling.
1606 Systems Analysis and Modelling, Assignments, 3,0 hp
Grading scale: Fail, E, D, C, B, A
Group assignments with focus on modelling.
1607 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.
1608 Software Development, Assignments, 3,0 hp
Grading scale: Fail, Pass
Individual assignments with focus on object oriented programming in Java.
1609 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.
1610 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.
1611 IS Project, Software Development Assignment, 2,0 hp
Grading scale: Fail, E, D, C, B, A
Group assignment. Project work focused on software development.
1612 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.

Applies from H15

1501 Information Systems as a Subject, Assignments, 1,0 hp
Grading scale: Fail, Pass
Individual assignment
1502 Information Systems as a Subject, Course Article, 3,0 hp
Grading scale: Fail, E, D, C, B, A
Group assignment
1503 Business and Information Systems, Written Exam, 3,0 hp
Grading scale: Fail, E, D, C, B, A

Individual assignment

1504 Business and Information Systems, Assignments, 1,0 hp
Grading scale: Fail, Pass
Group assignment

1505 Systems Analysis and Modelling, Written Exam, 2,0 hp
Grading scale: Fail, E, D, C, B, A
Individual assignment

1506 Systems Analysis and Modelling, Assignments, 3,5 hp
Grading scale: Fail, Pass
Group assignment

1507 Systems Analysis and Modelling, Business Processes, Assignm., 2,5 hp
Grading scale: Fail, Pass
Group assignment

1508 Software System Construction, Written Exam, 3,5 hp
Grading scale: Fail, E, D, C, B, A
Individual assignment

1509 Software System Construction, Assignments, 1,0 hp
Grading scale: Fail, Pass
Individual assignment

1510 Information and Communication Systems, Written Exam, 1,0 hp
Grading scale: Fail, E, D, C, B, A
Individual assignment

1511 IS Project, Business Processes, 1,5 hp
Grading scale: Fail, E, D, C, B, A
Group assignment

1512 IS Project, Systems Analysis and Modelling, 1,5 hp
Grading scale: Fail, E, D, C, B, A
Group assignment

1513 IS Project, Software System Construction, 1,5 hp
Grading scale: Fail, E, D, C, B, A
Group assignment

1514 IS Project, Information and Communication Systems, 1,0 hp
Grading scale: Fail, E, D, C, B, A
Group assignment

1515 IS Project, Course Subject, Oral Presentation, 1,0 hp
Grading scale: Fail, Pass
Individual assignment

1516 IS Project, Feedback and Reflection, 1,0 hp
Grading scale: Fail, E, D, C, B, A
Group assignment

1517 Learning Portfolio and Assignments, 1,0 hp
Grading scale: Fail, Pass
Individual assignment