Course syllabus for

Supplementary course in computer systems science, 15 credits

Kompletteringskurs i data- och systemvetenskap, 15 hp
This course syllabus is valid from autumn 2010.

Course code	4HI001
Course name	Supplementary course in computer systems science
Credits	15 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Not applicable
Level	GX - First cycle
Grading scale	Excellent, Very good, Good, Satisfactory, Sufficient, Fail, Fail
Department	Department of Learning, Informatics, Management and Ethics
Decided by	Programnämnd 5
Decision date	2010-05-25
Course syllabus valid from	Autumn 2010

Specific entry requirements

Bachelor of science or professional qualification of at least 180 credits within health care, biomedicine, technology, data and software engineering or informatics. Furthermore, knowledge in English equivalent to English B (with at least the Pass grade) is required.

Objectives

The aim of the course is that students, with a small or no prior knowledge requirement, in the area of data and software engineering should get sufficient knowledge to be able to take the other courses in the area at the master's level. On completion of the course, the student should be able to: List and describe the component parts in a computer List and describe the component parts in an operating system Describe how common data types are represented in a computer Describe Internet's basic structure and how data are communicated in a network Describe the most common software engineering models and reason about their applicability in a given situation Define the different phases in a system development project Apply basic principles of design of user interfaces Evaluate requirement of software Describe common system architectures Design a simple object-oriented system including database by means of UML Carry out simple program by means of basic programming techniques (selection, iteration, etc) Interact with databases through SQL Describe common safety threats against computers, network and information systems

Content

Basic data and software engineering Information system Databases theory and practice Man-machine interaction Computer safety Software development

Teaching methods

The course consists of lectures, seminars, computer exercises, an individual work and group assignment.

Examination

The course applies continuous examination. To each aim is linked one or several examination part in the form of written assignments, tests, seminars etc The grades on these are then weighed connected to a final course grade. The higher education credits in the course is divided into a nine credit block that the student is approved on when he/she have a pass in 3/5 of the examination part of the course, and a six credit block that requires that the student is finished with all examination parts. The six credit part is graded with the grading scale A-F, where A-E constitutes an approved result and F has failed results. This grade decides the collected grade in the whole course. Limited number of examinations or practical training sessions Students who have not passed the regular examination are entitled to participate in five more examinations. If the student is not approved after four examinations, he/she is recommend to retake the course at the next regular course date, and may, after that, participate in two more examinations. If the student has failed six examinations/tests, no additional examination or new admission is provided. The number of times that the student has participated in one and the same examination is regarded as an examination session. Submission of a blank examination is regarded as an examination. An examination for which the student registered but not participated in, will not be counted as an examination.

Transitional provisions

After each course, there will be at least 6 occasions for examination within a 2-year period after the end of the course.

Other directives

The course is given in English.

Literature and other teaching aids

Baltzan, Paige; Phillips, Amy

Business-driven information systems

2. ed. : Boston : McGraw-Hill, 2009 - 519 s.

ISBN:978-0-07-016448-2 LIBRIS-ID:11438810

Library search

Brookshear, J. Glenn

Computer science : an overview

9. ed. : Boston : Pearson/Addison-Wesley, cop. 2007 - 615 s.

ISBN:0-321-43445-5 (International ed.) LIBRIS-ID:10075153

Library search

Connolly, Thomas M.; Begg, Carolyn E.

Database systems : a practical approach to design, implementation and management

4., [rev.] ed. : Harlow : Addison-Wesley, cop. 2005 - l, 1374 s.
ISBN:0-321-21025-5 (hft.) LIBRIS-ID:9559789
URL: http://www.booksites.net/connbeggz Companion website
Library search

Sommerville, Ian

Software engineering

8. ed. : Harlow : Addison-Wesley, cop. 2007 - xxiii, 840 s.
ISBN:0-321-31379-8 LIBRIS-ID:10150050
Library search