Course syllabus for

Health information systems - design, architecture and interoperability, 5 credits

Hälsoinformationssystem - design, arkitektur och interoperabilitet, 5 hp
This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.

Course code	4HI006
Course name	Health information systems - design, architecture and interoperability
Credits	5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Health Informatics
Level	AV - Second 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	2010-11-09
Revised by	Education committee LIME
Last revision	2019-11-22
Course syllabus valid from	Spring 2011

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 general aims of the course are to provide knowledge and skills within the fields of clinical information systems, underlying concept - and information models, system architectures, health informatic standards, terminologies and interoperability.

On completion of the course, the students should be able to:

Knowledge and understanding
- account for the importance of infrastructures such as terminology and standards for handling of patient information.
- explain how different levels of models through model transformations can be used for system construction.

- explain the structure/the architecture of service-oriented systems (SOA).
- account for different ways to use controlled terminology for healthcare documentation.
- account for different ways to use health informatic standards to achieve interoperability between health information systems.

Skills and ability
- analyse different system architectures for health information systems.
- methodologically be able to use models and component based design principles to design and construct component based systems.

Assessment ability and attitudes
- evaluate possible fields for standardisation and possible choices of standards.
- utilise different skills in the group and learn of one another.

Content

- architectures for information systems within healthcare, particularly service-oriented and component based ones.
- model-driven development and model-driven architecture and its basic techniques (MOF, CWM and XMI).
- health informatics standards and terminologies; HL7, OpenEHR, SNOMED.

Teaching methods

Lectures/teaching sessions, seminars and group assignments.

Examination

Written assignments and examination. The written assignments are assessed with Fail/Pass. The examination is assessed with A-F.

The grade of the course is the same as for the examination and is set first when Pass has been achieved on the written assignments.

Limited number of examinations
The student has the right to participate in six examination sessions. If the student has not passed the exam after four participations he/she is encouraged to visit the study advisor.

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

The course is closed.

Other directives

Course evaluation will be carried out in accordance with the guidelines established by the Board of Education.

The course is given in English.

Literature and other teaching aids

Benson, Tim.

Principles of health interoperability HL7 and SNOMED

New York : Springer, c2010. - xxiii, 263 p.
ISBN:978-1-84882-802-5 (hbk.) LIBRIS-ID:12027501
[Library search](#)

Kleppe, Anneke G.; Warmer, Jos; Bast, Wim

MDA explained : the model driven architecture : practice and promise

Boston, Mass. : Addison-Wesley, 2003 - xvii, 170 s.
ISBN:0-321-19442-X (alk. paper) LIBRIS-ID:9344378
[Library search](#)