Course syllabus for

Computer applications in health care and biomedicine, 10 credits

Informationssystem i hälso- och sjukvården, 10 hp
This course syllabus is valid from autumn 2015.
Please note that the course syllabus is available in the following versions:
Autumn2012 , Autumn2014 , Autumn2015 , Autumn2016 , Autumn2017 , Autumn2018 , Autumn2020 , Autumn2021 , Autumn2024

Course code	5HI001
Course name	Computer applications in health care and biomedicine
Credits	10 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Health Informatics
Level	AV - Second cycle
Grading scale	Fail (F), fail (Fx), sufficient (E), satisfactory (D), good (C), very good (B) or excellent (A)
Department	Department of Learning, Informatics, Management and Ethics
Decided by	Programnämnd 5
Decision date	2012-03-29
Revised by	Programme Committee 5
Last revision	2015-03-20
Course syllabus valid from	Autumn 2015

Specific entry requirements

A Bachelor's degree or a professional degree equivalent to a Swedish Bachelor's degree of at least 180 credits in health care, biomedicine, medical technology, computer and systems sciences, informatics or the equivalent. Knowledge of the English language equivalent to English B at Swedish upper secondary school.

Objectives

On completion of the course the student should be able to:

Knowledge and understanding
- analyse, discuss and reflect on the information and communication needs in the health care and describe common sources of information,
- analyse, discuss and problematize the use of information systems in health care.

Skills and ability
- describe the structure, functionality and use of e.g: medical record systems, telemedicine applications or computer applications within medical education or public health.

Assessment ability and attitudes
- reflect on the integration problems between different information systems that are used in health care,
- analyse, discuss and reflect on legal/ethical aspects concerning the structure and the use of information system in health care.

Content

- Business processes, care processes, care logistic and referral management
- The care information needs – communication – sources of information – transfer and use (basic informatics – collection processing and presentation of a patient-related data)
- Realisation of evidence based care and the connection to research.
- Operational follow up, quality assurance and Quality Register
- Information retrieval – information structures – standards (introduction to classifications and terminologies)
- Exemplification/Description of information systems in the areas of Clinical informatics, Consumer health informatics and Public health informatics.
- The structure, contents and the use of the patient journal - Legal and ethical aspects
- Integration problems between different systems
- Data Security – Ethical and legal aspects

Teaching methods

The course is divided into four separate parts in which experts give lectures and demonstrations. The component parts are:
- General part (Health informatics) (G)
- Clinical Informatics (CI)
- Consumer Health Informatics (CHI)
- Public Health Informatics (PHI)
and its practical use

Examination

Each part has its own examination in form of individual assignments. Each individual assignment will be graded with A-F.
The final grade for the course is a weighted average of grades for all course components. To pass the course you must get at least E in all parts.

Limitation of number of occasions to write the exam
The student has the right to write the exam six times. If the student has not passed the exam after four participations he/she is encouraged to visit the study counsellor.

Transitional provisions

Examination will be provided during a time of two years after a possible cancellation of the course. Examination can take place according to an earlier literature list during a time of one year after the date when a major renewal of the literature
list has been made.

Other directives

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

The course is given in English.

Literature and other teaching aids

Shortliffe, Edward H.; Cimino, James J.
Biomedical Informatics : Computer Applications in Health Care and Biomedicine

4th ed. 2014. : - XXVI, 965 p. 253 illus., 135 illus. in color.
ISBN:9781447144748 LIBRIS-ID:16200023
URL: Table of Contents / Abstracts
Library search

Coiera, Enrico.
Guide to health informatics

2nd ed. : London : Arnold, 2003. - xxvii, 440 p.
ISBN:9781444114003 (e-book : PDF) LIBRIS-ID:15181107
URL: Table of Contents / Abstracts
Observe that the 3rd edition of this book is available in Spring 2015. Use this newer edition when available through KI library.
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