Linnæus University

Course syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

GI7151 Barns naturvetenskapliga och tekniska omvärld, 30 högskolepoäng

Children's Scientific and Technological Surroundings, 30 credits

Main field of study
Biology, Physics, Chemistry, Technology

Subject Group
Educational Sciences/Theoretical Subjects

Level of classification
First Level

Progression
G1N

Date of Ratification
Approved by the Board of the School of Computer Science, Physics and Mathematics 2009-08-11

Revised 2010-08-18. Revision of prerequisites and course evaluation.

The course syllabus is valid from spring semester 2011

Prerequisites
NO VALUE DEFINED

Expected learning outcomes

Upon completion of the course, the student should be able to:

- plan, execute and evaluate activities in pre-school and the early school years that encourage children to develop an interest for science and technology
- work on practical problem solving, including problem identification, construction and assessment
- deal with scientific and technological items associated with, among other things, gender, environment, ethics and global prospects
- place scientific and technological items in current and historical contexts
- make conscious didactic choices from the starting points of national and local policy documents
- initiate, execute and evaluate local development projects associated with the process of learning in the subjects science and technology.

Content

The course deals with questions concerning the identity of science and technology.

Scientific/technological problem solving, including problem identification, solution, construction and assessment are included in the course. Theoretical and practical aspects and items are integrated.

The scientific/technological interaction between the individual, society and the environment. The needs, driving forces and conditions that characterise the growth of science and technology make up the elements. In this way weight is given to gender, environment, ethics and global prospects.

Important events and happenings in the history of science and technology and their significance for mankind and the development of society are highlighted. The didactics of the subjects, biology, physics, chemistry and technology, as well as the study of current policy documents are fundamental for the entire course.

The in-service training comprise the study of policy documents, planning, classroom observation, evaluation of children's pedagogical activities as well as the examination of children's thinking.

Module 1 1NT111, Children's Scientific and Technological Surroundin 7.5 credits
For detailed information, see each course syllabus.

Module 2 1NT112, Children's Scientific and Technological Surroundin 7.5 credits
For detailed information, see each course syllabus.

Module 3 1NT113, Children's Scientific and Technological Surroundin 7.5 credits
For detailed information, see each course syllabus.

Module 4 1NT114 In-service training 7.5 credits
For detailed information, see each course syllabus.

Type of Instruction

The course is a distance course via the Internet. The students are expected to work both independently and in groups. Before each different part of the course precise information will be given concerning literature, study tasks and presentation models. The presentation of the tasks may be made collectively through base group conferences and receive a commentary from the teacher. Tasks may also be individual.

Attendance at meetings is obligatory.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).
On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

Following grades is given for the sub-courses 1-3: Fail, Pass or Pass with Distinction. For the sub-course 4: Fail or Pass.

The examination is conducted through the presentation of obligatory tasks as well as participation in seminars via a web based conference system. The types of assessment used in the course will be decided on at the beginning of the course. Students who do not pass the regular examination are given the opportunity to do a resit shortly after the regular examination.

Students who do not pass sub-course 4, are offered one second retrial.

Course Evaluation

Course Evaluation

A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

Required Reading and Additional Study Material

Required reading
Specified in each module.

Alternative literature
Specified in each module.

Reference Literature
Specified in each module.