

Science Education for Postgraduate/Doctoral Students, 3.0 credits

Naturvetenskaplig utbildning för doktorander, 3.0 hp

Third-cycle education course

6FIFM05

Department of Physics, Chemistry and Biology

Valid from: First half-year 2024

Approved by

Approved

Registration number

Entry requirements

Entry requirement for studies on third-cycle education courses

- second-cycle degree,
- 240 credits in req acquisition of equivalent knowledge in some other manner

Specific entry requirements for this course

- That the student is actively involved in teaching at the time the course is conducted

Learning outcomes

By the end of the course the students will be able to:

- describe fundamental conditions for learning
- describe content-specific challenges to learning within natural sciences and engineering
- meet, challenge and assist students in a laboratory environment
- describe challenges for teaching and learning at the undergraduate level

Contents

The course consists of three blocks

Block 1: What promotes learning?

Block 2: Students prior knowledge and preconceptions

Block 3: The role of the teacher

Educational methods

Each block require preparatory work to later participate in different seminars. Part of the course content is provided also as a lecture. Written assignments, an oral presentation of a didactic task and a practical teaching exercise including feedback and reflection complete the course.

Examination

All course moments are mandatory and are examined as pass/fail. Seminars are examined with a written reflection report. The didactic task is examined by an oral presentation and a written report. The practical teaching exercise is examined orally with the feedback from other course students

Grading

Two-grade scale

Course literature

The course will use the book “Academic Teaching” by Elmgren and Henriksson as a red thread throughout the course. Complementary research articles for each seminar will be also provided.

General information

The course is planned and carried out according to what is stated in this syllabus. Course evaluation, analysis and suggestions for improvement should be fed back to the Research and PhD studies Committee (FUN) by the course coordinator. If the course is withdrawn or is subject to major changes, examination according to this syllabus is normally offered at three occasions within/in close connection to the two following semesters.