Faculty of Science

MNXB03, Physics and Gender, 7.5 credits

Fysik och Genus, 7,5 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2022-06-14 to be valid from 2022-06-14, spring semester 2023.

General Information

The course is an elective course at first cycle level and may be included in a candidate- or master's degree in science or in teacher education.

Language of instruction: English

Main field of studies	*Depth of study relative to the degree requirements*
-	G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

Learning outcomes

The aim of the course is that the student, on completion of the course, should have acquired an introduction to a gender perspective on physics with a focus on the research and education of the university level.

Knowledge and understanding

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

1. summarise and explain the importance of gender in physics from a historical and contemporary perspective.

2. explain the gender concept and how it relates to physics.

3. discuss and analyse, with a gender perspective, the methods and culture of physics.

4. analyse how a gender perspective can influence the contents and applications of physics.

Competence and skills

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

5. analyse and reflect about the physics education and research that takes place in higher education institutions in Scandinavia from a gender perspective.

6. use standard literature and online material about gender perspective to analyse research and education in physics.

7. in writing reflect on questions in the subject area for the course.

8. present a scientific project orally and in writing.

9. give feedback on other students' work in a constructive way.

Judgement and approach

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

10. critically discuss the gender perspective on physics in research and education.

11. discuss and respond to resistance against evidence- and research-based results in the field the course treats and in the extension in the natural sciences.

Course content

The course consists of two modules:

Module 1: Introduction to gender science and its application to physics, 4.5 credits

The first part of the course constitutes a short introduction to gender science and its application to physics. Different theories within gender research are presented. Fields like the learning of physics, the history of physics, the knowledge production and culture of physics is analysed from a gender perspective. Both statistical, quantitative and qualitative analyses from socio-psychological, anthropological and sociological studies is presented to describe sex segregation, balance of power, culture and knowledge in physics.

Module 2: Project on a gender perspective on physics, 3 credits

In this part of the course, the students carry out one of the following project:

- a gender analysis of their own activities in physics or an example from the department they study in. This can imply a gender analysis of different aspects of the education, e.g. examination forms, course organization and structure, course literature, laboratory sessions, lectures, interaction between students, teacher and assistants.
- a literature study or similar in relevant fields for the course.

Course design

The teaching consists of lectures, group work and project work. The course is net distributed and is given via internet, but the course includes optional seminars and lectures on campus in Lund or other higher education institution in Scandinavia.

Participation in group work and project work and thereto integrated teaching is compulsory. The project can be carried out in a smaller group but then it should be clear what each student has contributed with.

Assessment

Examination takes place in the form of:

- written answers to assignments that assess intended learning outcomes 1-7.
- active participation in all compulsory components that assess intended learning outcomes 1-6 and 10.
- written presentation of the project that assesses intended learning outcomes 1-6 8, 10 and 11.
- oral presentation of the project that assesses intended learning outcomes 1-6 8, 10 and 11.
- feedback on other student's work that assesses intended learning outcomes 9.

For students who have not passed the regular examinations, additional examinations in close connection to these are offered.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass.
To pass the whole course it is required to pass written assignments, written and oral presentation of project as well as feedback on other student's presentation of a project and participation in all compulsory components.

Entry requirements

Admission to the course requires at least 90 credits in physics, physics didactics, mathematics or an equivalent discipline for example the three first semesters on an undergraduate education in physics, or an equivalent discipline and English 6/B.

Further information

The course cannot be included in a degree together with the course MNXB02 Gender in science and technology, 7.5 credits.

Subcourses in MNXB03, Physics and Gender

Applies from V23

2301 Module 1, presence and assignments, 4,5 hp
Grading scale: Fail, Pass
2302 Module 2, project, presentation and feed-back, 3,0 hp
Grading scale: Fail, Pass