SK2905 – Superconductivity and other quantum liquids, 7.5 credits

Course analysis - autumn 2023

Basic information

The course was given in period 2, autumn 2023, and had 6 active students. Course responsible was Magnus Andersson. The course consisted of two parts:

PRO1 (3.0 credits): Project work
IMU1 (4.5 credits): Oral examination

Intended learning outcomes

After finished course the student should be able to:

- apply basic theory and concepts of superconductivity
- analyze and evaluate superconducting applications
- apply basic concepts for other quantum fluids

Pedagogic development

Due to an extremely high workload during Autumn, no real course development was made for this year.

Quantitative data

All students have passed the course. The average grades were somewhat lower than last years, but this may be a consequence of a smaller group of students this year.

Course assessment

The final course questionnaire was answered by 3 students (50% of the participants in the course).

General conclusions

The course is seemingly working quite well based on the comment given in the questionnaire. Two students had “Good” as the overall impression about the course and the third one considered it as “Very good”. The course literature (compendia by the lecturer) was very appreciated. Some suggestions to improve the course was to:
i) include more about BCS theory
ii) Clarify some of the quiz questions

Examination

The examination was mostly appreciated, and one student answered also “If it ain’t broke, don’t fix it”. However, there was a more general feeling that the work done during the course should contribute more towards the final grade. This should probably be a prioritized course development issue for next year.

Summary for next year’s course

Prioritized work for next year’s course round:

• Find a way to let the work during the course result in a higher impact on the final grading.

• The course material on quantum liquids and gases can be improved.