

Template ICAB 2025

Title: Scaling-up Quantum Physics

We are teaching a course in quantum physics for the 1st year of the joint VU and UvA Physics and Astronomy Bachelor program. In the past we were teaching in a standard lecture followed by working group configuration, but in the 2023-2024 season we choose for a more intense Scale-Up version of teaching.

Fundamental physics concepts can be complex and require full engagement of students to construct understanding and to develop problem-solving skills.

The lectures are based on a collaborative group-learning pedagogy, where the students are asked to work in small groups on exercises after a short instruction by the teachers.

Students work within their group and then group results are discussed for the full classroom, leading to a dynamic teaching experience to directly digest quantum physics. During this workshop we will discuss how we experienced this method and we reflect on the positive, but also the negative experiences (and a few unknowns). Both from a teacher and from a student perspective.

Speaker

Prof. dr. A.P. (Auke-Pieter) Colijn is an astro-particle physicist that worked on CERN experiments to discover the Higgs boson, and who is now trying to find Dark Matter in underground laboratories. He is an experienced lecturer at the University of Amsterdam, where he has taught many courses in several of the BSc programs, with a focus on the 1st year physics courses.

Workshops will be scheduled in 60 minute timeslots

Workshop language = English