GERMAN-ARMENIAN **STUDENT COURSE ON ACCELERATOR PHYSICS 2025**

An internship in advanced accelerator physics at the CANDLE institute in Armenia is offered with the support of PIER, DESY and the Hamburglobal funding program. The internship is carried out in small mixed teams of German and Armenian students. It will replace one of the 4 experiments of the UHH Advanced Practicum in Physics (PHY-FP).

During the one-week stay each team will perform one out of 8 across a wide range of accelerator physics and technology experiments offered at the AREAL accelerator (CANDLE SRI). AREAL is an ultrafast laser-driven electron accelerator that produces extremely short relativistic electron pulses using high-frequency electric fields. In addition to the acquired important skills, the students will experience the significance of international cooperation and personal contacts. The course is to be conducted in English and is expected to be held October 05-12, 2025.

COURSES

Beam physics and diagnostics

Energy and energy spread Beam phase space Beam profile and charge

Ultrafast lasers

IR and UV lasers Laser pulse manipulation Beam shaping and control

Generation of ultrashort relativistic electron beams

Photoelectric effect High gradient acceleration Significance of relativistic kinematics

Accelerator technology

Ultrahigh vacuum Beam-matter interactions Magnets for accelerators

Electromagnetic fields

Cavities and waveguides High-power electromagnetic fields RF measurements and control



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FOR MORE

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