

USPAS AND ITS ROLE IN EDUCATING THE NEXT GENERATION OF ACCELERATOR SCIENTISTS AND ENGINEERS

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Abstract

Accelerators are essential engines of discovery in fundamental physics, biology, and chemistry. Particle beam based instruments in medicine, industry and national security constitute a multi-billion dollar per year industry. More than 55,000 peer-reviewed papers having accelerator as a keyword are available on the Web. Yet only a handful of universities offer any formal training in accelerator science. The United States Particle Accelerator School (USPAS) is a National Graduate Educational Program that has developed a highly successful educational paradigm that, over the past twenty years, has granted more university credit in accelerator / beam science and technology than any university in the world. The USPAS offers a responsive and balanced curriculum of science, engineering, computational and hands-on courses. Sessions are held twice annually, hosted by major US research universities that approve course credit, certify the USPAS faculty, and grant course credit. Somewhat different approaches to accelerator education are offered by other programs in Europe and Asia such as the CERN Accelerator School, JUAS, and the KEK school.

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