

Reimagining the teaching of physics in university

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In France, the teaching of physics at a university level generally follows the classical pattern lecture / tutorials / students' labs. Within this framework, we developed in our university new teaching units based on a project approach, following a "learning by doing" philosophy; a one semester unit focusing on outreach project (such as street art as a way to engage a public, a board game to discover astrophysics, and so on), and a week-long students' lab using the Arduino technology and letting the students choose and building their experimental setup. The outreach unit has been running for two years; the latter unit will be tested next year. We will present and discuss these units and how they are perceived by the students, who are not used to this approach. We will also present new ways to talk about physics that can be used outside the university to engage a larger public, developed in collaboration with designers, graphic and web professionals (see www.physicsreimagined.com).

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