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Impact of undergraduate research internships at Lawrence Berkeley National Laboratory

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Undergraduate research experiences (UREs) allow students to develop a skill set linking their coursework to professional opportunities and are fundamental to the pursuit of a career in science, technology, engineering, and mathematics (STEM). Although the exposure to hands-on technical skills can be observed directly, student learning gains and the impact of these programs on students' careers are more challenging to measure. UREs have been assessed primarily through self-reported survey responses, but it would be yet more informative to combine this information with longitudinal data or empirical research to measure the larger impact of these programs from a variety of perspectives. The U.S. Department of Energy (DOE) funds URE programs that give undergraduate and post-baccalaureate participants the opportunity to work with a team at one of the 17 DOE laboratories/facilities across the United States. The work described here is a project to examine the impacts of internship programs administered by Workforce Development & Education at Berkeley Lab: the Community College Internship (CCI) and Science Undergraduate Laboratory Internship (SULI). We have conducted a summative program evaluation to assess the outcomes and impacts of the CCI program by analyzing extant information from 2009 to 2016, administering surveys to program alumni, and conducting interviews with alumni. We will share plans to evaluate the academic and career outcomes for CCI and SULI alumni through quantitative measures. Overall, we are particularly interested in determining which programmatic elements are really "making a difference" in participants' professional development and acquisition of skills that will prepare them for success in STEM fields.

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