

Abstract Submitted
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The transformation of a low producing program into a very dynamic and successful Physics program¹ CRISTIAN BAHRIM, PEGGY DOERSCHUK, Lamar University — We will present the evolution of the Physics program at Lamar University during the last five years, and the benefits of receiving NSF funds for sponsoring our majors in research and outreach. Our experience as participants in an interdisciplinary NSF-sponsored program, called STAIRSTEP, which also includes computer science, mathematics, chemistry, and geology, and the results obtained since its inception in 2009 will be reported. Physics at Lamar was identified as a low-producing program by the THECB standards, and was in danger of being closed in 2011 and 2013. The infusion of engaging materials in foundational physics courses, including peer mentoring with our STAIRSTEP students in laboratory, led to the induction and retention of many UG students in our program. Our teaching approach, including an engaging hands-on education at the UG level, and more flexibility in the curriculum requirements, led the Physics program to experience an unprecedented growth in the number of majors, from 16 in 2011, to 42 in 2014, as well as in the graduation rate, from one in 2011, to 11 in 2014. Our experimental-based learning approach uses the laboratory as the basic environment for instruction. Our participation in other national programs, such as McNair and NASA, also contributed to our growth. Examples of teaching strategies adopted and the impact on our students' success will be presented.

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